AMERICAN GAS ASSOCIATION

Monthly

DECEMBER
1959

LOOK WHAT GAS IS DOING NOW!

The new RCA WHIRLPOOL Gas Range wins the Gold Star

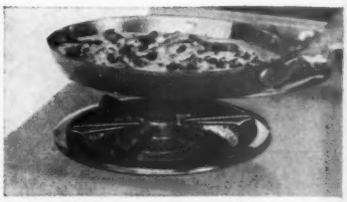
GOLD STAR AWARD · AMERICAN GAS ASSOCIATION, INC.

World's Newest Emblem of Excellence

Only the finest ranges from the world's great Gas Range Makers qualify for this coveted Gold Star Award. Below are just a few of the more than 28 advances in performance, automation and design a range must have to meet new Gold Star Standards. No wonder now, more people than ever will be cooking with Gas!

Faster, cooler, cleaner cooking than ever before!

CABINETS BY WHIRLPOOL



ACCURACY! Burner-with-a-Brain* on an RCA WHIRLPOOL range pot-watches all by itself; raises or lowers flame *automatically* to hold cooking temperature constant. *Food won't scorch, burn, boil over!*

SPEED! Broil (with the door *shut*) in this regular broiler . . . or use the new radiant-heat Gas broiler, with built-in rotisserie and an RCA WHIRLPOOL automatic baster. *It's fast—it's great—with Gas!*

COOL ECONOMY! The extra-thick insulation of an RCA WHIRLPOOL keeps heat in, makes baking and broiling cooler for you, saves time and fuel. And—*no failures* in that even-flowing Gas heat!

ANOTHER GAS AWARD-WINNER! Oven, broiler, top burners—everywhere you look on a Gold Star winner you see new automatic features that save time, trouble and money . . . make cooking faster, cooler, cleaner than ever. Yet ranges built to Gold Star standards cost *less* to install and use. *Don't buy any range until you see ranges built to new Gold Star standards at your Gas company or dealer's.*

AMERICAN GAS ASSOCIATION

Guaranteed by Good Housekeeping

RCA Whirlpool
GAS APPLIANCES FOR THE HOME

ONLY GAS does so much more...for so much less!

*A.G.A. Mark © Am. Gas Assoc., Inc.

Whirlpool Corporation, St. Joseph, Michigan. (Use of trademarks RCA and authorized by trademark owner, Radio Corporation of America.)

A Northern Natural Gas Co. worker admires a company drilling rig in this award-winning photo taken by company photographer R. L. Hansen

THE A. G. A. PAR Public Information Program has won national recognition for the second consecutive year. The American Society of Association Executives selected A. G. A.'s program as the best among large national associations because of its "outstanding activities for public service." (See page 2.) In 1958, A. G. A. was cited by "Public Relations News" for having one of the 10 best public relations programs in the United States. . . . Dr. G. Herbert True, writer, lecturer, and creativity consultant, and the featured speaker at the A. G. A. convention's final luncheon, has announced the results of a gas industry creative survey taken prior to the convention. (See page 12, November issue.) Dr. True says that "without a doubt, the creative potential of the executives in the gas industry is above average, but they certainly are not utilizing their creativity to the utmost of their ability. By that, I mean they are not aware of some of the things that make them more productive," he added. . . . It had to happen sooner or later: just introduced and advertised from coast to coast is the Hammacher Schlemmer duro-lite, the "electric light bulb with gas-flame charm." They call it a "new concept in lighting decor." Says their advertising copywriter, "This revolutionary new light bulb is a miracle of 'gas flame' enchantment."

JAMES M. BEALL
DIRECTOR, PUBLIC INFORMATION

WALTER H. DYER
EDITOR

RICHARD F. MULLIGAN
ART SUPERVISOR

JANE POWELL
NEWS EDITOR

EDITORIAL OFFICES:
AMERICAN GAS ASSOCIATION
420 LEXINGTON AVE., NEW YORK 17, N.Y.

CONTENTS FOR DECEMBER 1959

FEATURES

PR PROGRAM WINS TOP ASAE AWARD 2

NEW A. G. A. FILM TELLS HAZARDS OF STATIC ELECTRICITY . . . 4

CHICAGO MUSEUM TELLS GAS STORY 7

1,150,000 TEXANS SEE LONE STAR GAS EXHIBIT 10

ASA OKAYS 22 A. G. A. REQUIREMENTS 13

MAKING PAR POSSIBLE 14

SECTIONS

SPECIAL TAX RULES AID EMPLOYEES—by Robert R. Frei (Accounting) . 17

GAS MEN STUDY EMPLOYEE PROBLEMS (General Management) . . 19

GAS EXHIBITS SPARK TWO TRADE SHOWS (Industrial and Commercial) 22

CCR SET MEETS PEAK-SHAVING NEEDS—by C. B. Glover (Operating) 25

7,963 DRYERS SOLD IN SEVEN WEEKS (Residential) 27

DEPARTMENTS

MEET YOUR ASSOCIATION STAFF (Gerald P. Mullins) 8

INDUSTRIAL RELATIONS ROUND-TABLE 9

FACTS AND FIGURES 16

INDUSTRY NEWS 29

A. G. A. ANNOUNCES NEW PUBLICATIONS FOR NOVEMBER . . 30

HIGHLIGHTS OF CASES BEFORE FPC 34

PERSONAL AND OTHERWISE 36

OBITUARY 38

CONVENTION CALENDAR 39

PERSONNEL SERVICE 40

INDEXED BY APPLIED SCIENCE AND TECHNOLOGY INDEX

VOL. 41 **NO. 12**

• The "American Gas Association Monthly" is published 11 times a year, monthly, except in July and August, when there is a bimonthly issue, by American Gas Association, Inc., 420 Lexington Avenue, New York 17, N. Y. The publication office is located at 73 Main Street, Brattleboro, Vt. Address communications to 420 Lexington Avenue, New York 17, N. Y., including manuscript copy for publication. The Association is not responsible for statements and opinions contained in papers and discussions appearing herein. Cable addresses: American Gas Association, "Amerigas, New York"; American Gas Association Laboratories, "Amerigaslab, Cleveland." Annual subscription: $5 domestic (United States and Canada) and $6 foreign. Second class mail privileges authorized at Brattleboro, Vt.

POSTMASTER: Send Form 3579 to American Gas Association 420 Lexington Ave., New York 17, New York.

AD FILE
A SEAL OF SATISFACTION FOR YOUR GAS APPLIANCE
THE STORY OF AMERICAN GAS ASSOCIATION APPROVAL SEAL
pr and you
PR FOR PROFIT
MEET THE NEW GAS INDUSTRY
A BROADENING PERSPECTIVE FOR THE GAS
CE TO FACE
HERE'S OUR PRESS KIT ON THE
PARADE OF GAS
CORONET
NATURAL GAS—

C. S. Stackpole (l.) receives award from ASAE's Paul A. Slone

PR program wins top ASAE award

● *A. G. A. named Grand Award winning lar*

For the second consecutive year, the A. G. A. PAR Public Information Program has earned national recognition for the Association.

The American Society of Association Executives named A. G. A. the Grand Award winner in the large national association class for "A. G. A.'s outstanding activities for public service" during the Society's 40th annual international meeting held from Nov. 15-22 in Boca Raton, Fla.

In 1958, A. G. A.'s Public Information Program won the *Public Relations News* Achievement Award as "one of the 10 best public relations programs in the United States."

The PAR Public Information Program, organized in 1955, is headed by James M. Beall, director of public information.

A. G. A. was named the winner of the annual ASAE award following a comprehensive screening of candidates by an awards jury headed by Secretary of Commerce Frederick H. Mueller. Other jury members were Dr. George Bennett, director, The Psychological Corp.; Dr. A. D. Bruce, president, University of Houston; Erwin D. Canham, president,

ng large associations for 'outstanding activities for public service'

the United States Chamber of Commerce, and editor, *The Christian Science Monitor;* and Stanley C. Hope, president, National Association of Manufacturers.

During a special awards luncheon at the Boca Raton Hotel with some 500 top association executives looking on, A. G. A. Managing Director C. S. Stackpole was presented with a handsome, personalized plaque by Paul A. Slone, chairman, ASAE Awards Committee, and executive secretary, National Association of Dental Laboratories.

A. G. A. was chosen for the top award as a result of an exhaustive public relations program. The project, when organized in 1955, had these major goals:

To stimulate new public appreciation of the gas industry.

To help solve the intricate problems hampering gas industry growth.

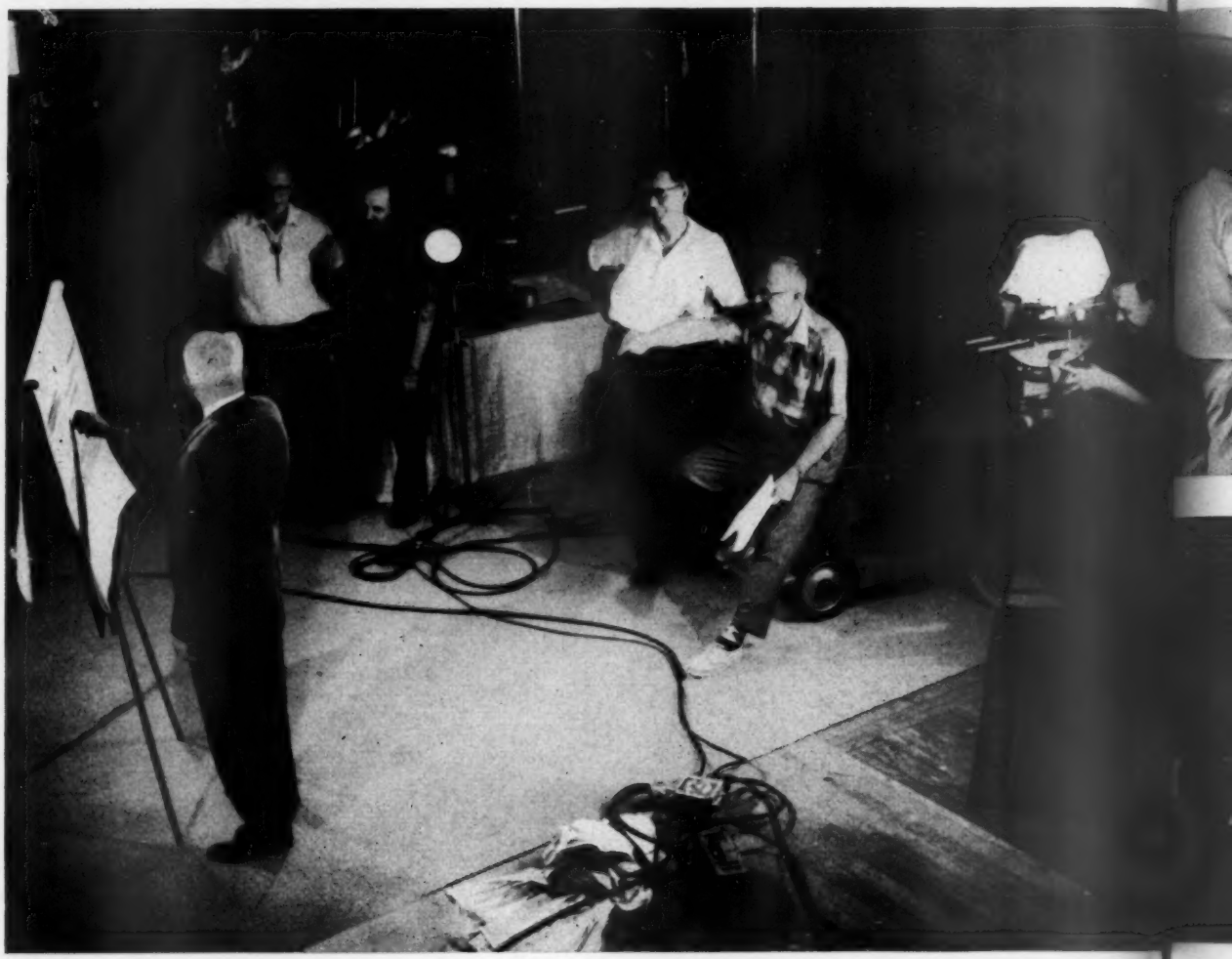
To develop concrete programs that would assure the industry of keeping pace with the changing times.

In granting the award to A. G. A., ASAE said that "A. G. A.'s highly successful efforts resulted in a fuller understanding of the value of good public relations by member companies and a desire by employees to utilize PR tools to promote the industry. The program further increased interest by the press and the public at large in the gas industry, as well as by the financial community. Finally, the program developed a higher caliber of job applicants for positions, resulting in better personnel and more efficient and enlightened operations throughout the industry."

Competition was open to the nearly 2,000 ASAE membership who represent more than 1,500 key associations in business, industrial, technical and professional fields throughout the United States, Canada and some foreign countries.

Besides the large national category, ASAE also presented Grand Awards and Awards of Merit to medium national, small national, and state and local associations.

Finishing behind A. G. A. in the large national class were these Award of Merit winners: American College of Radiology, American Institute of Certified Public Accountants, and National Lumber Manufacturers Association.



G. M. Kintz of the Bureau of Mines illustrates and describes an explosion caused by static electricity

New A.G.A. film tells hazards of static electricity

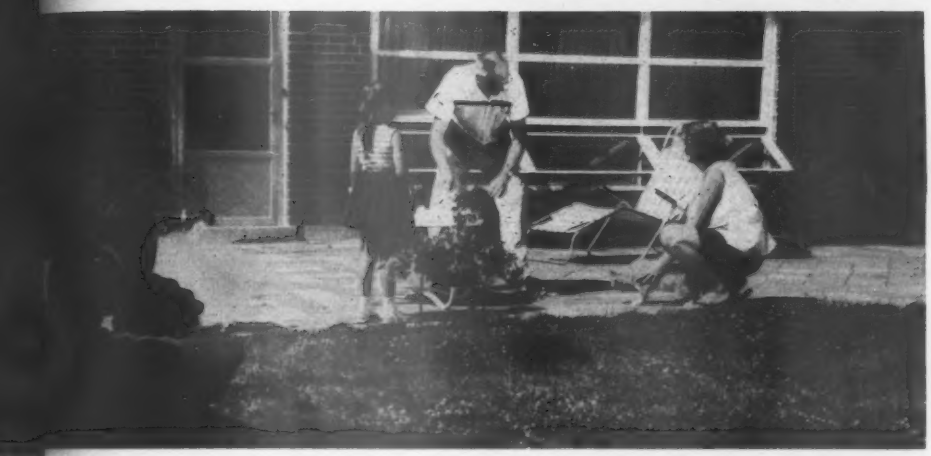
The A. G. A. Accident Prevention Committee, in cooperation with the United States Department of the Interior, Bureau of Mines, has produced a 16mm sound motion picture in color that explains the hazards and the control of static electricity.

The movie, entitled *Static Electricity,* is based upon scientific research by government and industry. It is designed to tell employees how static electricity is generated in industry and in the home. It points out the hazards of static, and shows how to control it at home and on the job.

Because so few people are aware of the hazards and the methods of protection against this force, the committee recommends that the film be made available to every operating man in the gas industry. It has a running time of 22 minutes, and has been described as "a dramatic uncovering of the sly, silent destructive power in static electricity."

The committee also recommends that industries having "static generators"—such as liquids falling through space, belt-driven motors or machines, or solids suspended in air that

A cameraman films the precautions taken in refueling operation at Chicago's Midway Airport to prevent ignition of flammable liquids by static electricity



Robert Kennedy (center), director of "Static Electricity," prepares the principals for a scene showing a home accident that resulted from static electricity

flows through pipes or down chutes—take advantage of this training aid.

The opening scenes on static show situations that are commonly experienced. They include sliding across plastic seat covers in an automobile and receiving a shock when the car door is touched, walking across a carpet during a period of low humidity and touching a metal object or a person and receiving a shock, and petting a cat under low humidity conditions.

The remainder of the film is based on a series of demonstrations developed by G. M. Kintz and H. F. Browne of the Bureau of Mines. Each demonstration is climaxed with visual and auditory evidence of static generation by means of an "explosion tube" that has an optimum explosive mixture. The tube is capped with a paper diaphragm, and the mixture is ignited by the generated static spark.

One demonstration illustrates that static electricity is generated by the contact and separation of materials. Another shows the minute amount of energy required to generate a spark hot enough to ignite a flammable mixture.

Another highlight shows static being generated with a liquid conductor (mercury). It also shows how this static can be grounded.

It is explained that lightning, nature's most spectacular display of static, can be generated in a thundercloud by the contact and separation of raindrops in turbulent conditions.

It shows that when charged raindrops fall to earth, they leave one charge on the cloud or atmosphere and bring an opposite charge to earth.

A demonstration and an actual location scene show thunderclouds causing premature detonation by charges induced onto the electric blasting line. The film recommends that only static-resistant detonators be used in areas where thunderstorms may occur.

One other common fallacy—that humidity prevents the generation of static—is exposed. Humidity can only prevent the accumulation of static charges by a microscopic film of moisture that bonds all surfaces together electrically.

G. M. Kintz (above) uses Wimhurst machine to show how stray currents or induced charges on a pipeline cause ignition when there is no bonding. H. F. Browne (r.) demonstrates hazards of static electricity during unload'ng of flammable liquids and (above r.) illustrates how static electricity results from contact and separation of materials

One scene shows a man wearing heavy woolen and synthetic clothing under ideal dry weather conditions. As he walks, the layers of clothing, through contact and separation, generate a heavy charge upon his body. As he reaches for an open can containing a flammable fluid, a spark ignites the vapors.

The purpose of the entire production is to bring out these facts: that static can be minimized when handling flammable liquids by filling tanks from the bottom up, by properly bonding and grounding machines and equipment, and by the proper use of lightning rods.

The film may be purchased from Order Department, A. G. A., 420 Lexington Avenue, New York 17, N. Y. The film costs $200 plus shipping charges.

Study issued on employee health, welfare plans

A. G. A.'s INSURANCE COMMITTEE has announced the availability of a "thorough and competent" study on current health and welfare plans for employees. The study was prepared by The Foundation on Employee Health, Medical Care, and Welfare, Inc.

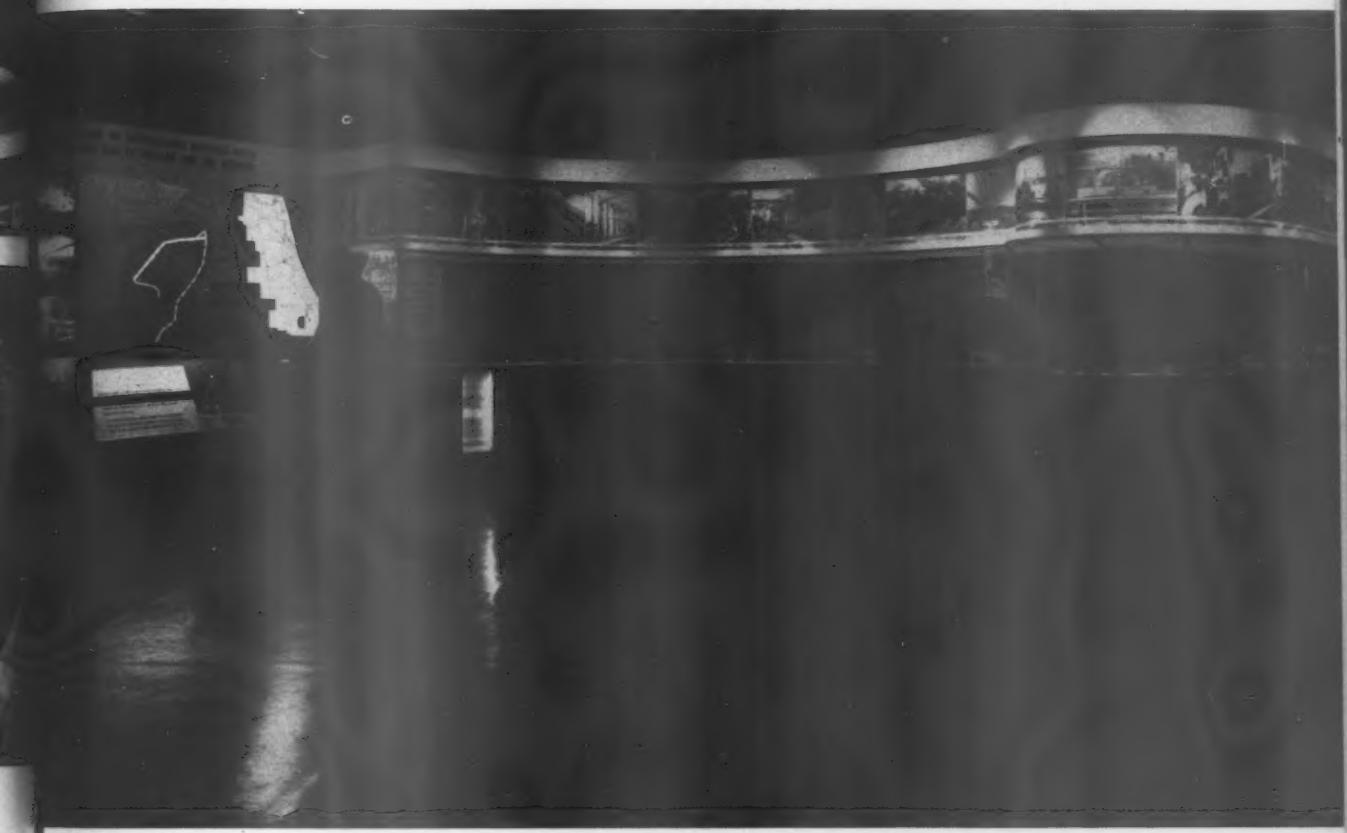
Entitled "Problems and Solutions of Health and Welfare Programs," the study consists of Part A, "Improving Value and Reducing Costs," and Parts B and C, "Service Benefits —and How To Compare Service vs. Indemnity Benefits." These two parts include discussions of the analysis of benefits and costs on both indemnity and service plans, how to obtain comparable quotations and how to analyze them, how to review costs periodically, and how to compare indemnity and service benefits.

Part D, which will be issued soon, will discuss the advantages and disadvantages of self-insurance in health and welfare programs.

The foundation is sponsored jointly by U. S. Industries, Inc., and the International Association of Machinists.

Both parts of the study are available from the foundation, 477 Madison Avenue, New York 22, N. Y. One copy of each part is free of charge. Additional copies of Part A are 35 cents each. Extra copies of Parts B and C are $1 each.

Chicago Museum tells gas story



Visitors to the Chicago Museum of Science and Industry study "The Story of Flame Gas," an exhibit sponsored by The Peoples Gas Light and Coke Co. in conjunction with the recent A. G. A. convention

The Story of Flame Gas, an exhibit at the Museum of Science and Industry in Chicago, has been redesigned to reflect recent changes in gas technology.

Sponsored by The Peoples Gas Light and Coke Co., the exhibit was first installed at the museum in 1950 to mark 100 years of gas service in Chicago. Since then, thousands of Chicagoans and out-of-town visitors have seen the display, which traces natural gas from the well to the consumer.

The comprehensive program of redesign provides for greater viewer participation through the use of animated displays. Many industry advances made since 1950 in the transmission, storage, distribution, and utilization of gas are shown. Periodic changes are planned to keep the exhibit up to date.

The exhibit tells how and where gas is found, and how it is brought to the burner tip for use in the home and in industrial and commercial establishments.

Among the exhibit's features are these:

A three-dimensional pictorama of installations and transparent buildings (showing machinery in place) required in the operation of a modern natural gas system. A continuous tape recording tells the gas production story to the listener, who picks up a telephone receiver.

A cutaway of underground formations showing how natural gas is injected, stored, and withdrawn from a reservoir. Lighted panels describe the step-by-step operation. Actual cores from underground rock formations are displayed.

Representative uses of gas in other in-

Briefly told. THIS IS HOW NATURAL GAS IS EXTRACTED, PROCESSED AND PIPE-LINED A THOUSAND MILES TO YOUR GAS APPLIANCE.
EXPLORATION
ENGINEERING
WELL DRILLING
REFINING AND PROCESSING
TRANSMISSION
STORAGE
PRESSURE REGULATING AND METERING
DISTRIBUTION TO HOME COMMERCE INDUSTRY

At right, Eskil I. Bjork (l.), chairman of Peoples Gas Light and Coke, and Major Lenox Lohr, president of the Museum of Science and Industry, listen to a recorded description of the three-dimensional exhibit on "The Story of Flame Gas." A portion of the display is pictured above

dustries, such as coffee roasting and steel annealing.

A panel on heating and cooling a residence with gas.

Also displayed are photographs and diagrams that depict the research and testing operations in a gas company, a panel that explains various facts about the gas flame, cutaway models of modern gas appliances, an operating gas meter with transparent sides, and many other interesting phases of the gas industry.

Meet your Association staff

Gerald P. Mullins

Jerry Mullins, Home Bureau manager, fishing and sports car enthusiast, Ella Fitzgerald fan, and amateur artist, has two major goals for 1960: to make the "Blue Star Home" program the most popular builder promotion in the nation and to gain even greater national acceptance for the New Freedom Kitchen and Laundry.

Jerry was affectionately called "A. G. A.'s Christmas present" when he joined the Association on Dec. 26, 1956. This was no misnomer, for he has proved himself to be a "gift" of value during the past three years. Starting as assistant to the promotion manager, he moved ahead quickly, becoming assistant to the director of advertising and promotion in March 1958 and Home Bureau manager in August 1958.

He coordinates three areas of activity for the Home Bureau. These include editorial contact with leading shelter, trade and business publications; planning and arranging unified gas exhibits in national trade shows; and participating in the nation's builder activities.

Jerry stresses both the "Blue Star Home" and the New Freedom Kitchen and Laundry at trade shows held by such groups as A. G. A., National Association of Home Builders, American Home Economics Association, American Institute of Architects, and National Retail Lumber Dealers Association. In addition, he maintains a year-round display at the National Housing Center in Washington, D. C.

A native New Yorker, Jerry left the city long enough to attend an upstate military academy and later Georgetown University in Washington, D. C., where he received a Bachelor of Arts degree in history and philosophy.

Following a hitch in the Army, Jerry joined Lennen and Newell, the advertising agency that handles the A. G. A. consumer account. Jerry soon became known to A. G. A. and subsequently migrated here.

He and his wife, Joan, and seven-month-old daughter, Lisa Joan, make their home in a Brooklyn apartment.

Industrial relations round-table

Prepared by
A. G. A. Personnel Committee

Edited by W. T. Simmons
Assistant Personnel Manager
Philadelphia Electric Co.

● **The responsibility for developing managers**—Edmund B. Bruner of the personnel relations department of American Telephone and Telegraph Co. recently wrote an interesting article entitled "Recognizing Our Responsibility for Developing Managers." The article, which appeared in Bell Telephone's magazine, discussed the problems of management development. Its conclusions, as well as its recommendations, are applicable not only to American Telephone and Telegraph but also to nearly every other utility company.

Mr. Bruner compared the leaders of business—the managers—to a football team. When the game is in progress, he said, the football coach cannot take time to teach his team the rudiments of the sport. If he has not already accomplished this basic instruction, he is very likely to put on the field a team that will operate far below its potential.

The problems of business he added, are much the same: Are key spots filled by the best people? Are there adequate replacements? Can each replacement fill any spot in which he might be needed? Has the recruiting job assured an adequate supply of people for the future?

As in the case of the football players, these men are not found ready-made—rather, they are produced.

The article stated that there are five significant changes which have brought management development to the forefront. They are these: (1) the growth of the total economy and of the individual organizations, (2) the trend toward decentralization, (3) the rapid changes that increase the complexity of the manager's job, (4) the acceptance of the fact that many of the skills of good management can be taught, and (5) an awareness that many people operate far below their capabilities.

● **Five tests for initiative**—An article in the June 1959 issue of *Nation's Business* stated that the man who is rising in many companies today seems to have five basic qualities that mark him apart from other executives. They are these:

An inner drive that others lack—The result-getter has the ability to pick a single goal and to bring all his knowledge, talents, and qualities of leadership to bear on it.

The ability to concentrate on important things—He has learned how to wade through the underbrush of trivia to reach and accomplish the things that really matter.

A talent for tapping and using the ideas of others—He knows instinctively how to create a climate where ideas will be volunteered freely and how to give credit when an idea is usable.

The sense to be tough-minded—He has a high tolerance for frustration and a spartan endurance in the face of red tape, delays, and run-arounds.

The skill to overcome obstacles—He has the ability to turn a stumbling block into a step up. One manager once said, "I get a kick out of tearing into a problem that everybody is moaning about. When I solve something that somebody else said couldn't be done, the whole rat race seems worthwhile."

● **Arbitration decision: Arbiter upholds employer selection of junior employee after work test**—Arbiter Carl A. Warns, Jr., ruled that The Dayton Power and Light Co., had not violated its contract with Local 175 of the Utility Workers Union when it passed over a senior employee to fill a job opening with a bidder who, though junior in point of service, showed the most skill, efficiency, and ability in a six-week trial given by a company foreman.

There had been three employee bidders for a job as a second class repairman-machinist. The local union had subsequently put in a grievance complaining that the company had disregarded the contract seniority clause on filling vacancies or making promotions or transfers. In making these changes, the contract says, the considerations should be seniority, ability, and physical fitness; where skill and fitness are relatively equal, it notes, seniority shall govern.

When the opening developed, the foreman had been instructed to select the applicant who was "best qualified for the job." The supervisor was to be the sole judge of qualifications. The union argued that the company had had no authority to use the method it did for selecting an employee for the vacancy. It stated that the grievant, N, had been hired in December 1945 and that the successful job bidder, W, had been hired in January 1952. Its point was that N had the knowledge and ability to do the job and also had the senior rating.

Dayton Power and Light said that the six-week try-out period had been used before. The try-out included a written test, in which the three bidders scored about the same. The foreman however, decided that W was outstanding, that he had performed the work with a minimum of help and very little spoilage, and that he showed an aptitude for operating machine tools. The report on the unsuccessful bidder stated that he did not exhibit a high aptitude, that he seemed unsure of himself, that he constantly solicited help in doing the try-out work, and that his production was slower and his spoilage was greater.

The arbiter said that there could be no quarrel with the union's argument that management's method of finding the best man for the job had not followed the requirements of the seniority clause on filling vacancies. He said this:

> The agreement does not authorize the company to appoint the best qualified man for a job vacancy or a new job; the company under the contract must select the senior employee, if the other factors enumerated are relatively equal with that of the junior applicant."

Mr. Warns said that it was a serious question whether the failure of the company to place the requirements of the contract before the foreman as the "determining standard for job selection" was a sufficient basis to reverse the company's award of the job to the junior employee.

He took a careful look at all that the company did in making a selection from three bidders who seemed to management to be potentially able to do the work. There was no evidence that the foreman treated one man differently from the others, he said, and it appeared that each bidder received the same try-out training and opportunity. He said this:

> Apart from the failure of the company to instruct the foreman to use the contract as a guide in making his selection, I do not find that the company's actions in using a trial period in itself violates the contract. This is true even though there is nothing in the contract itself setting forth such a procedure. The best evidence as to whether an employee can do a job is to give him a fair trial on it. In many cases it is the company that will refuse to give an employee a chance and it is the union that insists upon it as the final practical test of whether the company's decision that an employee cannot do the job is accurate.

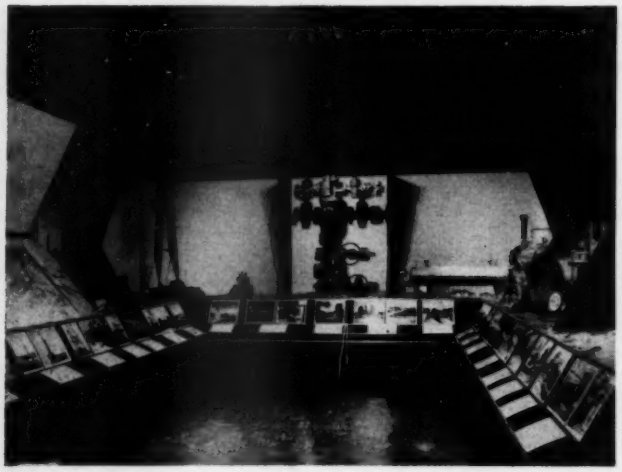
The next question, Mr. Warns said, was whether the foreman, as the sole judge of the results, could bind the union conclusively under the contract by an assertion of one man's superiority over another. Mr. Warns' comment was this:

> Here again fairness must be tempered with reality. I do not interpret the contract as permitting a bare assertion by a supervisor that the junior is superior to the senior as adequate. Claims that a junior employee is more efficient, more skilled, and better able to do a job must be supported by the kind of evidence available in view of the work accomplished.

He called attention to the company's showing as to the superiority of one man over the other in the six-week trial run, and he asked what more the company could have been re-

(Continued on page 21)

Three scenes at the Texas State Fair show (above) a "Blue Star Home" exhibit, (r.) Lone Star Gas Co.'s display building, and (below) the gas company's exhibit of the story of oil and gas from the well to the consumers in homes, business, and industry



Utility's 50 years of service told at Texas State Fair; displays give public better understanding of oil and gas industries

1,150,000 Texans see Lone Star Gas exhibit

More than 1,150,000 people visited the Lone Star Gas Co. exhibit at the Texas State Fair in Dallas during October.

In addition, some two million people were made aware of the utility's participation in the 17-day event by means of an extensive newspaper, radio, and television campaign conducted by Lone Star.

The gas company's exhibits were located in the Gas Exhibits and Women's buildings. The Gas Exhibits building, which has been leased by Lone Star since 1936, included a diversified group of educational displays. The Women's building featured gas appliances, many of which were presented in cooperation with appliance dealers in the Dallas area.

This was the first fair at which Lone Star emphasized educational exhibits. These displays, which were the subject

These gas units—(l. to r.) RCA Whirlpool washer-dryer, Roper dryer, RCA Whirlpool dryer, and Norge dryer—were displayed by Lone Star at Texas Fair

This animated exhibit was synchronized with a tape-recorded narrative that explained how natural gas is transported from the wellhead to the burner tip

This gaslit patio was built around the display area as a lounge

of an intensive promotional drive, gave the public a better understanding of the oil and gas industries and told of Lone Star's 50 years of service to Texas and Southern Oklahoma.

In addition to the educational displays, the company featured colorful commercial exhibits.

During the fair, Lone Star promoted its exhibits over loudspeakers located in six pylons situated in various areas of the 200-acre display site. Lone Star obtained broadcast rights, and rented the pylons, from the fair's management. Previously, the loudspeakers had been used by the fair's management to promote various attractions. Lone Star broadcast a combination of music and spot announcements about its exhibits.

Lone Star also arranged the appearances at the fair of Mrs. Margaret Priebe, Mrs. America of 1960; Mrs. Takako Saibara, a student of Ikebana, the Japanese art of flower arranging; and Beatrice West, president of Beatrice West Color, Inc., New York. All three of these women received both good advance press notices and much publicity via radio, television, and newspaper interviews concurrent with the fair.

Miss West, who had been commissioned by Caloric Appliance Corp. to design and color-coordinate a "Texas-style" kitchen for the exhibit, was at the fair during its opening week end, Oct. 9-10.

Mrs. Priebe, whose appearance was sponsored jointly by Lone Star and Whirlpool Corp., was at the fair for two days during the first week.

Mrs. Saibara, who appeared through the courtesy of Lone Star, demonstrated flower arranging during the second week's Garden Club Day.

One of the educational exhibits in the 6,448-square-foot Gas Exhibits building included photographs, animated displays, and scale models of equipment that told the story of oil and gas in Lone Star's 146,221-square-mile system.

The photographs, each of which measured 16 inches by 20 inches and had an attached explanatory caption, depicted the equipment, skills, and personnel involved in moving natural gas from the field to the point of use.

Included in the group of scale models and actual pieces of drilling, exploration, and field equipment were a gravity meter, a seismograph, drill bits, a jackknife drilling rig, a multiple Christmas tree, a horizontal monotube separator, a horizontal glycol dehydrator, a section

This ultra-modern kitchen was designed for Lone Star Gas in a Japanese motif

This Japanese garden complemented the kitchen. A gas barbecue is at center

of 24-inch pipe, and working models of industrial and domestic gas meters. In addition, there was a three-dimensional "Peg Model" that showed the oil and gas fields in the Upper Texas Gulf Coast region.

One of the animated display boards told the story of "How Geologists Find Oil" with a series of colored lights synchronized with a tape recording. The narrative described the various geologic periods in which oil is found.

Another animated exhibit told the story of natural gas from the wellhead to the burner tip. The recorded narrative, which explained production, transmission, and distribution, was synchronized to a series of colored lights. Included on the display panel were scale models of a drilling rig, a pumper, a compressor station, a scrubber, a city gate station, houses, a hotel, and an industrial plant.

All of the displays in the educational exhibit were secured by Lone Star's public information department. The exhibit will be available for future fairs and to schools.

Another exhibit featured a self-contained slide projector that presented the story of Lone Star's 50 years of service. The narrative described the company's continuing program of locating and procuring gas supplies sufficient for the current and future requirements of residential, commercial, and industrial customers in the Lone Star area.

Lone Star transmission and production engineers were on hand at the exhibits to answer questions.

Among the appliances displayed by the utility were washer-dryer combinations, dryers, bathroom heaters, water heaters, heating and cooling equipment, gas lights, free-standing ranges, built-in ranges and ovens, and refrigerators. Among the refrigerators was the new Norge gas unit, which made its public debut at the fair.

Lone Star also presented two model kitchens: one was designed in "Texas-style" and the other was decorated in a Japanese motif. Adjacent to the latter was a Japanese garden with a gas-fired barbecue set in crushed gravel and surrounded by Japanese landscaping. The garden also featured several Arkla hanging gas lamps made specially for the exhibit.

Beyond the kitchens, at the end of all of the exhibits, was a shaded, gaslit patio designed as a lounge area for the fair visitors.

ASA okays 22 A.G.A. requirements

Twenty-two gas industry appliance approval and accessory listing requirements sponsored by A. G. A. were approved recently as American Standard by The American Standards Association, Inc. The requirements' adoption as American Standard was recommended by the ASA Sectional Committee Z21 following approval of the provisions at a meeting held several months ago.

Of interest to the domestic and commercial appliance field are the requirements pertaining to gas-fired absorption summer air conditioning appliances, central heating appliances (including boilers, furnaces, floor furnaces, and vented recessed heaters), clothes dryers, counter appliances, deep fat fryers, duct furnaces, hotel and restaurant ranges, hot plates and laundry stoves, incinerators, portable gas baking and roasting ovens, domestic ranges (free-standing and built-in cooking units), room heaters, unit heaters, and water heaters. In the accessory field, the revised texts are applicable to domestic gas conversion burners, manual gas valves, and metal connectors for gas appliances.

The provisions covering metal connectors and gas-fired absorption summer air conditioning appliances became effective on Jan. 1, 1959, and July 1, 1959, respectively. All of the other new and revised American Standards will become effective on Jan. 1, 1960.

The provisions of these new standards will be applied to all gas equipment submitted to the A. G. A. Laboratories for testing and certification following the effective date. Equipment manufacturers, however, may submit their appliances to the Laboratories for testing and approval prior to that date.

The standard covering gas-fired absorption summer air conditioning appliances is new. Entitled "American Standard Approval Requirements for Gas-Fired Absorption Summer Air Conditioning Appliances," it is numbered Z21.40-1959. The approval of this standard as an American Standard permits the A. G. A. Laboratories to test and to certify gas-fired absorption summer air conditioning appliances under the industry's appliance approval program for the first time.

In other actions, extensive revisions to the American Standard known as Z21.30 were made and approved as American Standard. This new edition (the third) is titled "American Standard Installation of Gas Appliances and Gas Piping, Z21.30-1959." The phrase "in buildings" was discontinued in the title.

The provisions of Z21.30-1959 were revised to include appliance and piping installations using undiluted liquefied petroleum gases that had previously been excluded. This broader coverage was made possible through close cooperation between the National Fire Protection Association, the National Board of Fire Underwriters, the Liquefied Petroleum Gas Association, and the ASA Sectional Committee Z21. Extensive revisions were also made in the provisions covering venting of gas appliances and in the requirements covering air for proper combustion. In addition, the text includes provisions covering outdoor installation of gas equipment.

The new and revised standards are the results of a considerable amount of study and investigation of the construction and performance of contemporary equipment conducted by the A. G. A. Laboratories. Wherever possible, performance tests were developed to simulate conditions under which the appliances would operate in the field and to provide a wide latitude of design opportunity.

Members of the supervising subcommittees extensively reviewed the construction and performance provisions of these standards, both before and after receiving the opinions of the industry on the recommended revisions, before the changes were considered and recommended for adoption as American Standard by the ASA Sectional Committee Z21 of A. G. A.'s Approval Requirements Committee.

As a further check on the reliability of pilot operation, it was believed advisable to incorporate into the revised requirements for domestic gas ranges a provision specifying that top burner pilot flames are not to be extinguishable as a result of a concussion. For the test, a standard test utensil containing five pounds of water was dropped from a distance of two inches onto the top burner grates directly over each burner. In addition, the requirements for domestic gas ranges were expanded to cover more completely the testing of units having a room heater section.

The revisions to the requirements covering built-in domestic cooking units generally parallel those adopted for the free-standing domestic gas range. However, the provisions for built-in domestic cooking units also include requirements for testing open top broilers. No specific coverage was previously provided for this type of appliance, which has become increasingly popular in recent years.

The new requirements for domestic hot plates and laundry stoves represent

(Continued on page 20)

Making PAR possible

These companies are PARtners in '59. They are taking advantage of an action-tested team approach—an approach that helps the industry to maintain its leadership, while it helps the PAR subscriber to meet national promotion, advertising, research, and public information needs. PAR undertakes those jobs that can be done only, or done best, at the national level. Multiply your sales-power by joining PAR today!

NEW ENGLAND REGION

Algonquin Gas Transmission Co., Boston, Mass.
The Berkshire Gas Co., Pittsfield, Mass.
Blackstone Valley Gas and Electric Co., Pawtucket, R. I.
Boston Gas Co., Boston, Mass.
The Bridgeport Gas Co., Bridgeport, Conn.
Brockton Taunton Gas Co., Brockton, Mass.
Cambridge Gas Co., Cambridge, Mass.
Central Massachusetts Gas Co., Webster, Mass.
Concord Natural Gas Corp., Concord, N. H.
The Connecticut Light and Power Co., Hartford, Conn.
Fall River Gas Co., Fall River, Mass.
Fitchburg Gas and Electric Light Co., Fitchburg, Mass.
The Greenwich Gas Co., Greenwich, Conn.
The Hartford Electric Light Co., Hartford, Conn.
The Hartford Gas Co., Hartford, Conn.
Haverhill Gas Co., Haverhill, Mass.
The Houstonic Public Service Co., Derby, Conn.
Lawrence Gas Co., Lawrence, Mass.
Lowell Gas Co., Lowell, Mass.
Lynn Gas and Electric Co., Lynn, Mass.
Manchester Gas Co., Manchester, N. H.
Mystic Valley Gas Co., Malden, Mass.
New Bedford Gas and Edison Light Co., Cambridge, Mass.
New Britain Gas Light Co., New Britain, Conn.
New Haven Gas Co., New Haven, Conn.
North Shore Gas Co., Salem, Mass.
Northampton Gas Light Co., Northampton, Mass.
Norwood Gas Co., Norwood, Mass.
Providence Gas Co., Providence, R. I.
Springfield Gas Light Co., Springfield, Mass.
Wachusett Gas Co., Leominster, Mass.
Worcester Gas Light Co., Worcester, Mass.

MIDEASTERN REGION

Baltimore Gas and Electric Co., Baltimore, Md.
The Brooklyn Union Gas Co., Brooklyn, N. Y.
Central Hudson Gas and Electric Corp., Poughkeepsie, N. Y.
City Gas Co. of New Jersey, Flemington, N. J.
City Gas Co. of Phillipsburg, Phillipsburg, N. J.
The Columbia Gas System, Inc.
- Amere Gas Utilities
- Columbia Gas of Kentucky, Inc.
- Columbia Gas of New York, Inc.
- Cumberland and Alleghany Gas Co.
- The Manufacturers Light and Heat Co.
- The Ohio Fuel Gas Co.
- The Ohio Valley Gas Co.
- United Fuel Gas Co.
- Virginia Gas Distribution Corp.

Consolidated Edison Co. of New York, Inc., New York, N. Y.
Consolidated Natural Gas System
- The East Ohio Gas Co.
- Hope Natural Gas Co.
- Lake Shore Pipe Line Co.
- New York State Natural Gas Corp.
- The Peoples Natural Gas Co.
- The River Gas Co.

Delaware Power and Light Co., Wilmington, Del.
Elizabethtown Consolidated Gas Co., Elizabeth, N. J.
Equitable Gas Co., Pittsburgh, Pa.
Hagerstown Gas Co., Hagerstown, Md.
International Nickel Co., New York, N. Y.
Keokuk Gas Service Co., Keokuk, Iowa
Long Island Lighting Co., Mineola, N. Y.
New Jersey Natural Gas Co., Asbury Park, N. J.
North Penn Gas Co., Port Allegany, Pa.
Orange and Rockland Utilities, Inc., Nyack, N. Y.
Philadelphia Electric Co., Philadelphia, Pa.
Philadelphia Gas Works, Division of U.G.I., Philadelphia, Pa.
Public Service Electric and Gas Co., Newark, N. J.
Rochester Gas and Electric Corp., Rochester, N. Y.
South Jersey Gas Co., Atlantic City, N. J.
Syracuse Suburban Gas Co., East Syracuse, N. Y.
The United Gas Improvement Co., Philadelphia, Pa.
Washington Gas Light Co., Washington, D. C.

SOUTHEASTERN REGION

Alabama Gas Corp., Birmingham, Ala.
Atlanta Gas Light Co., Atlanta, Ga.
Florida Home Gas Co., DeLand, Fla.
Gas Light Co. of Columbus, Columbus, Ga.
Knoxville Utilities Board, Knoxville, Tenn.
Mid-Georgia Natural Gas Co., Sarasota, Fla.
Nashville Gas Co., Nashville, Tenn.
Piedmont Natural Gas Co., Inc., Charlotte, N. C.
Portsmouth Gas Co., Portsmouth, Va.
St. Augustine Gas Co., St. Augustine, Fla.
South Atlantic Gas Co., Savannah, Ga.
South Carolina Electric and Gas Co., Columbia, S. C.
Southern Natural Gas Co., Birmingham, Ala.
Texas Gas Transmission Corp., Owensboro, Ky.
Western Kentucky Gas Co., Owensboro, Ky.

SOUTHWESTERN REGION

Arkansas Louisiana Gas Co., Shreveport, La.

Arkansas Western Gas Co., Fayetteville, Ark.
Cities Service Gas Co., Oklahoma City, Okla.
El Paso Natural Gas Co., El Paso, Tex.
Houston Natural Gas Corp., Houston, Tex.
Lone Star Gas Co., Dallas, Tex.
Louisiana Gas Service Co., New Orleans, La.
New Orleans Public Service, Inc., New Orleans, La.
Oklahoma Natural Gas Co., Tulsa, Okla.
Phillips Petroleum Co., Bartlesville, Okla.
Pioneer Natural Gas Co., Amarillo, Tex.
Sabine Gas Co., Inc., Many, La.
Southern Union Gas Co., Dallas, Tex.
State Fuel Supply Co., Oklahoma City, Okla.
Texas Eastern Transmission Corp., Shreveport, La.
Transcontinental Gas Pipe Line Corp., Houston, Tex.
United Gas Corporation, Shreveport, La.
United Gas Pipe Line Co., Shreveport, La.
Zenith Gas System, Inc., Alva, Okla.

GREAT LAKES REGION

Allied Gas Co., Paxton, Ill.
Battle Creek Gas Co., Battle Creek, Mich.
Central Illinois Light Co., Peoria, Ill.
Central Illinois Public Service Co., Springfield, Ill.
Cincinnati Gas and Electric Co., Cincinnati, Ohio
Citizens Gas and Coke Utility, Indianapolis, Ind.
Citizens Gas Fuel Co., Adrian, Mich.
Consumers Power Co., Jackson, Mich.
The Dayton Power and Light Co., Dayton, Ohio
Hoosier Gas Corp., Vincennes, Ind.
Illinois Electric and Gas Co., Murphysboro, Ill.
Indiana Gas and Water Co., Indianapolis, Ind.
Kokomo Gas and Fuel Co., Kokomo, Ind.
Madison Gas and Electric Co., Madison, Wis.
Michigan Consolidated Gas Co., Detroit, Mich.
Milwaukee Gas Light Co., Milwaukee, Wis.
Natural Gas Service, Inc., Madison, Ind.
North Shore Gas Co., Waukegan, Ill.
Northern Illinois Gas Co., Aurora, Ill.
Northern Indiana Public Service Co., Hammond, Ind.
Pendleton Natural Gas Co., Pendleton, Ind.
The Peoples Gas Light and Coke Co., Chicago, Ill.
Princeton Gas Service Co., Princeton, Ill.
Richmond Gas Corp., Richmond, Ind.
Southeastern Michigan Gas Co., Port Huron, Mich.
West Ohio Gas Co., Lima, Ohio
Winnebago Natural Gas Corp., Kaukauna, Wis.
Wisconsin Public Service Corp., Milwaukee, Wis.
Wisconsin Southern Gas Co., Inc., Lake Geneva, Wis.

MIDWESTERN REGION

Cheyenne Light Fuel and Power Co., Cheyenne, Wyo.
Citizens Gas Co. of Hannibal, Hannibal, Mo.
Greeley Gas Co., Denver, Colo.
Iowa-Illinois Gas and Electric Co., Davenport, Iowa
Kansas-Nebraska Natural Gas Co., Inc., Hastings, Neb.
Laclede Gas Co., St. Louis, Mo.
Metropolitan Utilities District, Omaha, Neb.
Minnesota Valley Natural Gas Co., Minneapolis, Minn.
Montana-Dakota Utilities Co., Minneapolis, Minn.
Northern Natural Gas Co., Omaha, Neb.
Northern States Power Co., Minneapolis, Minn.
Public Service Co. of Colorado, Denver, Colo.
Pueblo Gas and Fuel Co., Pueblo, Colo.

WESTERN REGION

Mountain Fuel Supply Co., Salt Lake City, Utah
Northwest Natural Gas Co., Portland, Ore.
Pacific Natural Gas Co., Longview, Wash.
San Diego Gas and Electric Co., San Diego, Calif.
Southern California Gas Co., Los Angeles, Calif.
Southern Counties Gas Co. of California, Los Angeles, Calif.
Washington Natural Gas Co., Seattle, Wash.

CANADA

British Columbia Electric Co., Ltd., Vancouver, B. C.
Canadian Western Natural Gas Co., Calgary, Alta.
Northwestern Utilities, Ltd., Edmonton, Alta.
The Public Utilities Commission, Kitchener, Ont.
Union Gas Co. of Canada, Ltd., Chatham, Ont.
The Valley Gas Co., Ltd., Turner Valley, Alta.
Vancouver Island Gas Co., Ltd., Nanaimo, B. C.

PIPELINE COMPANIES

Algonquin Gas Transmission Co., Boston, Mass.
American Louisiana Pipeline Co., Detroit, Mich.
Atlantic Seaboard Corp., Charleston, W. Va.
Cities Service Gas Co., Oklahoma City, Okla.
Colorado Wyoming Gas Co., Denver, Colo.
Columbia Gulf Transmission Co., Houston, Tex.
El Paso Natural Gas Co., El Paso, Tex.
Home Gas Co., Pittsburgh, Pa.
Interstate Oil Pipeline Co., Shreveport, La.
Kentucky Gas Transmission Corp., Charleston, W. Va.
Lake Shore Pipe Line Co., Cleveland, Ohio
Michigan Wisconsin Pipeline Co., Detroit, Mich.
Natural Gas Pipeline Co. of America, Chicago, Ill.
New York State Natural Gas Corp., Pittsburgh, Pa.
Northern Natural Gas Co., Omaha, Neb.
Pacific Lighting Gas Supply Co., Los Angeles, Calif.
Panhandle Eastern Pipe Line Co., Kansas City, Mo.
Southern Natural Gas Co., Birmingham, Ala.
Texas Eastern Transmission Corp., Shreveport, La.
Texas Gas Transmission Corp., Owensboro, Ky.
Texas Illinois Natural Gas Pipe Line Co., Chicago, Ill.
Transcontinental Gas Pipe Line Corp., Houston, Tex.
Trunkline Gas Co., Houston, Tex.
United Gas Pipe Line Co., Shreveport, La.

Prepared by A. G. A. Bureau of Statistics

Private home starts in September 1959, on a seasonally adjusted basis, numbered 1,325,000, 5.6 per cent higher than the 1,255,000 recorded in September 1958. Actual home starts totaled 117,000, 5.5 per cent above the 110,900 registered in 1958. During the first nine months of 1959, 1,066,700 private homes were started. This figure is 28.2 per cent higher than the 832,100 in the same period of 1958.

The effect of continued increases in home building was shown in the increase in shipments of gas ranges, gas water heating equipment, gas-fired central heating units, and gas clothes dryers. Shipments of these major appliances were up during the first nine months of 1959 by 12.7 per cent, 13.9 per cent, 24.2 per cent, and 35.8 per cent, respectively, over the first nine months of 1958.

Total sales of the gas utility and pipeline industry during August 1959 increased 11.4 per cent over the 4,960 million therms sold in 1958. Sales to industrial consumers accounted for 74.1 per cent of the 5,526 million therms sold during August 1959. Sales of gas to residential and commercial customers aggregated 1,430 million therms, an increase of 8.8 per cent over August 1958. Customer growth, which is largely dependent upon the activity in the new homes market, was a prime contributing factor to the increase in residential and commercial gas sales.

Industrial gas sales during August 1959 increased 12.4 per cent over the 3,645 million therms sold in August 1958. The increase occurred despite the nationwide steel strike.

The index of industrial production, which is prepared by the Federal Reserve Board, also increased. During August 1959, the index of industrial production (1947-1949 = 100) was 149, up 13 points above the 136 of Au-

(Continued on page 21)

SALES OF GAS AND ELECTRIC RESIDENTIAL APPLIANCES DURING SEPTEMBER 1959

(WITH PER CENT CHANGES FROM THE CORRESPONDING PERIOD OF THE PRIOR YEAR)

	September		August		First Eight Months of 1959	
	Units	Per Cent Change	Units	Per Cent Change	Units	Per Cent Change
RANGES (including built-ins)						
Gas	205,700	+13.0	176,600	+12.0	1,294,900	+12.6
Electric	n.a.	n.a.	116,600	+44.0	1,094,700	+32.9
WATER HEATERS						
Gas	240,000	+ 4.3	253,900	+17.8	2,041,400	+15.1
Electric	n.a.	n.a.	56,400	— 7.5	555,000	+ 3.3
GAS HEATING—Total	168,000	+ 1.8	152,000	+23.4	811,200	+30.1
Furnaces	122,600	+ 5.7	115,100	+27.6	647,900	+35.1
Boilers	17,600	—13.3	16,700	+13.6	81,700	+21.4
Conversion Burners	27,800	— 3.1	20,200	+10.4	81,600	+ 6.8
OIL-FIRED BURNER INSTALLATIONS	66,870	— 1.7	72,890	+12.1	371,470	+14.2
DRYERS						
Gas	59,410	+21.9	45,910	+22.5	241,970	+39.7
Electric	115,150	+ 4.7	87,290	+20.6	493,890	+23.9

Source: Gas Appliance Manufacturer's Association, National Electrical Manufacturer's Association, "Fuel Oil and Oil Heat," and American Home Laundry Manufacturer's Association.

GAS SALES TO ULTIMATE CONSUMERS BY UTILITIES AND PIPELINES DURING AUGUST

(MILLIONS OF THERMS)

	1959	1958	Per Cent Change
Month of August			
All Types of Gas	5,526.1	4,959.9	+11.4
Natural Gas	5,439.2	4,864.4	+11.8
Other Gases	86.9	95.5	— 9.0
Twelve Months Ended August 1959			
All Types of Gas	86,153.4	79,184.8	+ 8.8
Natural Gas	83,792.2	76,780.1	+ 9.1
Other Gases	2,361.2	2,404.7	— 1.8
August Index of Monthly Utility Gas Sales (1947-49 = 100)	255.7	229.5	+11.4

PERTINENT BUSINESS INDICATORS, SEPTEMBER

(WITH PER CENT CHANGES FROM CORRESPONDING PERIOD OF THE PRIOR YEAR)

	September			August		
	1959	1958	Per Cent Change	1959	1958	Per Cent Change
Industrial activity (1947-49 = 100)	148	137	+ 8.0	149	136	+ 9.6
Consumer prices (1947-49 = 100)	125.2	123.7	+ 1.2	124.8	123.7	+ 0.9
Housing starts, Non-farm (thousands)	120.4	121.0	— 0.5	129.0	124.0	+ 4.0
New private construction expenditures ($ millon)	3,533	3,157	+11.9	3,642	3,126	+16.5
Construction costs (1947-49 = 100)	179.1	171.1	+ 4.7	179.4	170.7	+ 5.1

Newest fringe benefit for employees is the popular company-sponsored savings plan

Special tax rules aid employees

By ROBERT R. FREI

Attorney
Sidley, Austin, Burgess and Smith
Chicago, Ill.

The newest vogue in fringe benefits for employees is a company-sponsored savings plan. A great many employee savings plans have been developed within this framework:

1. The employee authorizes the company to withhold a specified portion of his compensation.
2. The company agrees to match all or some portion of the amount withheld.
3. The combined company and employee contributions are delivered to a trustee for accumulation and investment over a substantial period of time, and are ultimately distributed, along with the investment income, to the employee or his beneficiary.
4. The eligibility and other provisions are such as to enable the plan to "qualify" under Section 401(a) of the Internal Revenue Code.

Savings plans that qualify under Section 401(a) will benefit from the following special tax rules:

1. The employee is not subject to a tax on the company's contribution to the trust until the contribution is distributed to him. The company, however, is allowed an immediate tax deduction for its contribution.
2. The trust is not subject to tax on the income earned by investing the contributions.
3. If the employee's entire undistributed interest in the trust is distributed to him (or to his beneficiary in the event of his death) in one taxable year because of termination of employment (or death following termination of employment), the excess of the amount distributed over the total of the employee's own contributions is taxed as a long-term capital gain. Appreciation in the value of any stock of the company included in such a distribution is excluded in determining the amount of the gain, and any tax on such appreciation is deferred until the employee disposes of the stock.
4. If the employee dies while in employment and his interest in the trust is distributed to his beneficiary, the first $5,000 of gain realized on the distribution qualifies as a death benefit which is exempt from tax under Section 101(b) of the Internal Revenue Code.

These special tax rules allow employees to accumulate more money through a qualified savings plan than would be possible through their own savings program carried out with the same amount of money.

Assume that the employee contributes $6 per week under the savings plan and that the company contributes an additional $4, or a combined contribution of $10 per week. Also assume that investment of the contributions by the trust produces a yield of 4½ per cent compounded semiannually. If the employee participated on this basis over a 20-year period, his interest in the trust would be worth $16,778, of which $6,240 would have been contributed by the employee.

Thus, there would be a gain of $10,538 taxed as a long-term capital gain, if distribution is made in one taxable year due to termination of employment. If we assume that the $16,778 is distributed to the employee in the taxable year following his retirement, that his taxable income for that year from his pension and other sources was $4,000 and that he and his wife are both 65, the tax on the $10,538 long-term capital gain would be $982, leaving a net of $15,796 from the savings plan.

Let us also assume for comparison purposes that the company, rather than adopting a qualified savings plan, gives the employee a current pay increase of $4 per week, and the employee invests the $4, less the federal income tax payable on the $4, along with $6 per week from other sources over the same 20-year period in the same investments at the same yield. If we assume that the employee has a top income tax bracket of 26 per cent (the rate applicable to taxable income of $4,000 to $6,000 for a single taxpayer, $8,000 to $12,000 for a married taxpayer), he will have accumulated $13,213 at the end of the 20-year period. The $15,796 that would have been accumulated under the savings plan is $2,583 more—an increase of approximately 20 per cent.

The difference results because current taxes reduce the $4 pay increase to $2.96 available for investment. Taxes also reduce the effective investment yield from 4½ per cent to 3½ per cent. These factors are only partially offset by the tax payable upon a distribution from a qualified savings plan. That tax is not

(Presented at the 1959 National Conference of Electric and Gas Utility Accountants in Chicago.)

only deferred, it is generally at the lower rate applicable to long-term capital gains.

This comparison does not take into account that there would be substantial capital appreciation over the 20-year period. If capital gains were realized from time to time throughout the period, the advantage of the qualified savings plan would be heightened, for the trust would pay no tax on the realized gains. True, the employee will pay tax upon distribution of his interest. but in the meantime, 100 per cent of the gain will have been available for reinvestment.

Obviously, the higher the individual employee's tax bracket, the greater are the inroads of current taxes upon a private savings program, and the greater are the tax advantages of a qualified savings plan.

Employees with potential federal estate tax problems derive still another tax advantage from a qualified savings plan. Distributions made by the trust to designated beneficiaries of a deceased employee are not subject to federal estate tax except to the extent that the distribution is attributable to the employee's own contributions.

Other factors also contribute to the growing interest in savings plans. Savings plans provide both a substantial incentive to save and a practical method to invest savings. The incentive is provided by the company's agreement to match all or some part of each dollar saved by the employee.

Employees may invest regularly and systematically without the proportionately high loading or brokerage charges normally associated with periodic investments of small amounts. Moreover, depending upon the investment options available under the plan, employees may be able to invest in diversified, professionally selected equity securities under a method which possesses all of the merits of so-called "dollar-averaging." In our highly inflation-conscious economy, this aspect of the plans has widespread appeal.

From the viewpoint of the employer, savings plans are advantageous principally for their salutary effect on employee morale and loyalty. Like other deferred pay plans, they tend to reduce employee turnover, particularly if termination of employment with less than a minimum period of service results in forfeiture of a portion of the company's contributions. Many plans require, or at least permit, that all or a portion of the contributions be invested in company stock. Such plans can provide a wide base for employee stock ownership, both direct and indirect, without the usual problems of traditional stock purchase plans. They also provide a market for the employer's stock and tend to help stabilize the stock's market price.

Some attributes of savings plans (employee stock ownership, employee ownership of equity securities and tax-sheltered accumulation of company contributions and investment income) can be achieved to a larger or smaller degree by stock option plans and qualified profit-sharing plans, both of which have been widely adopted by industrial corporations. However, plans of this type, which are theoretically designed to produce larger profits and stock appreciation through increased employee incentive, are not logically or practically (or, in some cases, legally) adaptable to utilities whose rate of return is regulated.

Terminology is problem

The first problem for savings plans is terminology, for Section 401(a) applies only to a "stock bonus, pension or profit-sharing plan" of an employer. The term savings or thrift plan is not in Section 401(a) or in the applicable Treasury Department regulations. Hence, in order to qualify, a savings plan must meet all of the rules prescribed by Section 401(a) and by the regulations and rulings thereunder for either a pension plan, a profit-sharing plan, or a stock bonus plan.

Savings plans that obligate the company to match a specified percentage of the employee's own contributions regardless of the level of the company's profit, or whether the company has profits, have been qualified under Section 401(a) as pension plans of the so-called "money purchase" type.

However, classification of a savings plan as a pension plan for tax purposes carries disadvantages. Under a qualified pension plan, company contributions may be withdrawn only upon termination of employment, and employee contributions may not be withdrawn during employment except upon termination of participation in the plan. In addition, the Internal Revenue Service says that a pension plan cannot provide for a mandatory lump sum distribution upon retirement.

There must be a provision for installment distributions over a period of years, although provisions providing for lump sum distributions at the employee's election with the consent of the company have been permitted. Another disadvantage is that forfeitures, resulting from termination of employment before the employee's interest in the company contribution has fully vested, must be credited against subsequent company contributions and cannot be allocated among the remaining participants.

A savings plan will be classified as a profit-sharing plan under Section 401(a) providing the company's commitment to make contributions is contingent upon the existence of sufficient current or accumulated earnings and profits to cover the company contribution. The contribution does not need to be measured by profits; it needs only to be conditioned upon the existence of sufficient current or accumulated earnings and profits. In most cases, such a condition has no practical effect, for a corporation with an actual or potential operating deficit will rarely be indulging in fringe benefits of this type. However, such a condition is frequently inserted to secure the plan's classification as a profit-sharing one and to avoid the restrictions applicable to pension plans.

Unlike pension plans, a profit-sharing plan may provide for withdrawals of company and employee contributions during employment. Mandatory lump-sum distributions after retirement are permissible, and forfeitures may be allocated among the remaining participants. However, not all employers can resort to conditioning contributions upon the existence of current or accumulated profits in order to come within the profit-sharing classification. The profits, upon which the condition must be based in order to be effective, are federal income tax "earnings and profits."

Emergency amortization of defense facilities and the various methods of accelerating depreciation for tax purposes can produce marked differences between income tax profits and book profits. As a result, there are companies, particularly those with recent large capital outlays, that show satisfactory book profits, but do not show current or accumulated income tax "earnings and profits." Obviously, the employer contributions of such companies cannot, as a practical matter, be limited to current or accumulated income tax earnings and profits.

(Continued on page 21)

Employee selection, job performance improvement, and attitudes probed at personnel seminar

Gas men study employee problems

Gas executives from nine states met Oct. 21 in Philadelphia to explore some personnel problems common to industry.

The seminar and open discussion on employee selection, job performance improvement, and employee attitudes was sponsored by the Pennsylvania Gas Association, in cooperation with the New Jersey Gas Association and A. G. A.'s Personnel Committee. Some 150 gas leaders representing 31 companies attended.

Each area discussed was covered by a qualified speaker who later led a question-and-answer session on his topic.

William Pierson, president, Pennsylvania Gas Association, and Donald C. Lord, who represented Frank C. Pesveyc, president, New Jersey Gas Association, welcomed delegates. Mr. Pesveyc was unable to attend the meeting.

Hammitt L. Robbins, director of administration, Philadelphia Gas Works, division of The United Gas Improvement Co., and chairman, PGA Personnel Administration Committee, was chairman of the morning session. The afternoon chairman was Norman D. Bradley, system employee relations director, Consolidated Natural Gas Co., and chairman, A. G. A. Personnel Committee.

Randall A. Lightbody, assistant vice-president, Northern Illinois Gas Co., discussed the problems encountered in the selection and placement of employees with emphasis on the practical application of successful employment techniques.

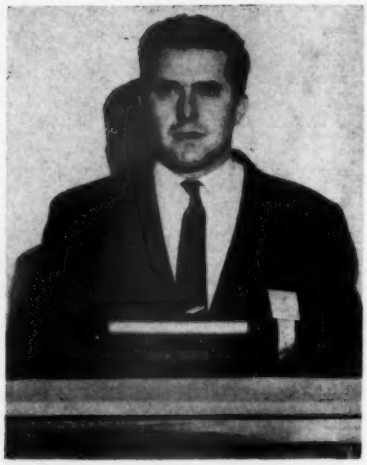
His topic ranged from application checking to the evaluation of an 80-day probationary period for new employees. His remarks on Northern Illinois' use of back X rays at employment for physical workers provoked considerable discussion.

The presiding officers at the morning and afternoon sessions, respectively, of the personnel seminar were Hammitt L. Robbins (r.) and Norman D. Bradley

The subject, "Improving Employee Job Performance," was discussed by Frank A. DeBernardis, coordinator, major projects, Esso Standard Oil Co. Mr. DeBernardis, an authority on training, described the responsibility of management to improve and to develop employee job performance, and reviewed the methods and practices now in general use in this field. He said that the training needs for a particular job are related to the requirements of the job in light of the knowledge, skill, and attitude the employee brings to the task.

Harry F. Pohlmann, Opinion Research Corp., asked this question: "Do You Know What Your Employees Really Think?" Mr. Pohlmann drew from the experiences of his company to highlight those methods which have been found successful in motivating employees. He also discussed some popular myths and misconceptions concerning employee attitudes. Data gathered during polls conducted by Opinion Research aided Mr. Pohlmann in interpreting the hidden causes of, as well as the necessary remedies to correct, unfavorable employee opinions.

The seminar was concluded by a panel



H. F. Pohlmann asked delegates, "Do You Know What Your Employees Really Think?"

Frank A. DeBernardis discussed "Improving Employee Job Performance"

Randall A. Lightbody considered problems in selecting and placing employees

discussion on employee attitudes. Members of the panel were John H. Hayes, personnel director, Equitable Gas Co.; Dewitt Pike, vice-president, Rochester Gas and Electric Corp.; Charles W. Provonchee, vice-president, Providence Gas Co.; and John K. Tolford, president, Citizens Gas Fuel Co.

Mr. Hayes presented a summary of an employee opinion survey that involved seven work groups. Five groups were nonunion, while the others were represented by two major unions. The results pinpointed the employees' negative attitudes toward the company and its policies.

The value of the "right" employees who have the "right" attitudes was appraised by Mr. Pike. "Right" employees can help "sell" a rate increase to the public, he said. They also can help build a favorable attitude toward the company throughout the community, he added.

The importance of recognizing employees as human beings and as members of the whole society was emphasized by Mr. Provonchee. Even minor company changes must be brought to employee attention, for workers are intimately concerned with any change which may ultimately affect them, he said. The key is attention to small things, analysis of individual problems and attitudes, backed by a historic and traditional recognition of firmness and fairness on the company's part, he added.

Mr. Tolford, reflecting experience with a small company (under 100 employees), illustrated the differences in the large and small company when dealing with employees on an intimate and personal basis. Ready access and understanding of mutual problems make formal grievances practically unknown in the small company, he observed.

The panel that discussed employee attitudes included (l. to r.) Norman D. Bradley (standing at rostrum), John H. Hayes, Dewitt Pike, Charles W. Provonchee, and John K. Tolford

ASA okays

(Continued from page 13)

a complete rewriting of the provisions to bring them up to date and in line with other standards. To avoid any possibility of confusion in the field between domestic hot plates and laundry stoves and built-in domestic cooking units, all hot plates and laundry stoves must be marked to specify a minimum installation clearance of six inches from the top edge of the appliance.

The revisions to the requirements for steam and hot water boilers are mainly for clarification of intent. The provisions include minimum specifications for the size of openings in perforated or expanded metal panels when such panels cover combustion air, circulating air, and draft hood relief openings. In addition, a new requirement has been added to specify that concealed combustion or ventilation air openings must be located a sufficient distance above floor level to minimize the possibility of their becoming restricted by foreign objects.

While the revisions for gravity and forced-air type furnaces are basically the same as those for boilers, additional provisions have been added to cover adequately the testing of "enclosed furnaces," which are designed primarily for heating places of assembly that are not permitted to use conventional furnaces. Such units are required to take all air for combustion from outdoors through so-called "all-weather grilles" which extend through an exterior wall but vent to the outdoors through a normal venting system with the draft hood inside the furnace enclosure. This type of unit should find wide use in school rooms and similar applications.

The provisions covering domestic gas clothes dryers now permit the testing and approval of units equipped with direct main burner ignition means. Although gas appliances traditionally have been required to have a gas pilot, several direct ignition means have been developed recently. These means appear to be entirely satisfactory and particularly adaptable to domestic gas clothes dryers. It is believed that the use of direct main burner ignition means will result in ignition systems that are more reliable and that will require less servicing than heretofore.

In the field of gas incineration, the revisions strengthen the burner and pilot operational characteristics requirements. In addition, the requirements provide a test procedure to determine whether ceramic baffles used in incinerators are sufficiently substantial to withstand the mechanical shock that might be encountered in transportation and handling, as well as the thermal shock imposed by operation.

While a number of other revised provisions have been included in the new and revised American Standards, they are mainly of an editorial nature. The basic text of the approval and listing standards was distributed to gas appliance manufacturers and equipment designers in multilith form prior to its submission to ASA for acceptance as American Standard.

Copies of the American Standards are available from the A. G. A. Laboratories, 1032 East 62 Street, Cleveland 3, Ohio. (See price list, page 32.)

Facts and Figures

(Continued from page 16)

gust 1958, but down four points from the index of July 1959. A. G. A.'s index of utility and pipeline sales (1947-1949 = 100) was 255.7, an increase of 26.2 points over August 1958.

During August 1959, gross capital additions to the gas utility and pipeline industry reached $194 million. The total for the first eight months of 1959 was $1,134 million. Gross capital additions for all of 1959 are expected to total $1,859 million.

During the 12 months ended August 31, 1959, total utility and pipeline sales amounted to 86,153 million therms, an increase of 8.8 per cent over the 79,185 million therms consumed in the 12 months ended August 31, 1958.

Special tax rules

(Continued from page 18)

Savings plans that require the company contribution to be made in, or invested in, stock of the company which is ultimately distributed in kind to the participating employees are classified as stock bonus plans for purposes of Section 401(a). Stock bonus plans usually are governed by the rules applicable to profit-sharing plans, except that company contributions need not be contingent upon profits. A high percentage of the existing savings plans require that company contributions be invested in company stock and, accordingly, be classified as stock bonus plans for tax purposes.

The principal requirement of Section 401(a) is that the plan must not discriminate in coverage, contributions, or benefits "in favor of employees who are officers, shareholders, persons whose principal duties consist in supervising the work of other employees or high paid employees." We shall refer to this category as "the prohibited group."

This requirement applies alike to all plans. In addition, Section 401(a) requires that the plan be for the exclusive benefit of employees and their beneficiaries, contributions of employer and employees be made to a trust, and the trust instrument prohibit the use of trust principal or income for purposes other than the exclusive benefit of employees and their beneficiaries.

The plan must not discriminate in its coverage in favor of the prohibited group. If at least 70 per cent of all employees are covered by the plan, or at least 80 per cent of all employees are eligible and at least 70 per cent of those eligible elect to participate,

(Continued on page 24)

Industrial relations

(Continued from page 9)

quired to do to document or substantiate its assertion of W's superiority. Mr. Warns noted in particular that N had testified at the hearing and that he had not denied the company's evidence as to the showing he had made on machine operations.

Mr. Warns pointed out that when the contract speaks of factors "relatively equal," the word "relatively" means in relation to other men who bid on the job, not in relation to employees now on the job or those who did not bid.

If the contract before me required the company to promote the senior applicant if he could do the job, I would have no hesitancy in upholding the grievance. It does not say that, however. The senior applicant must have equal ability to the junior applicants, whoever they may be. As previously discussed, it happened in this case that W, a junior applicant, proved himself better able for the vacancy.

American Meter Co. acquires The Granberg Corp. as a subsidiary

AMERICAN METER CO. has acquired all of the outstanding capital stock of The Granberg Corp., Oakland, Calif. Granberg will be operated as a subsidiary of American Meter.

Granberg was founded in 1937 to supply metering equipment for the delivery of gasoline and home-heating fuels. The firm is now a prime manufacturer of tank truck, bulk plant, and pipeline petroleum meters and pumps.

Granberg's stockholders have already approved the transaction.

Albert J. Granberg, the company's founder and president, will be retained as a consultant.

Since 1953, American Meter's expansion program has resulted in the construction of seven new plants and the acquisition of four companies in allied fields.

In a related development, Russell W. Wetjen was named to supervise Granberg's operations as vice-president and general manager. Mr. Wetjen is also general manager of Buffalo (N. Y.) Meter Co., another American Meter subsidiary.

American Meter plans to construct new testing and assembly facilities in Buffalo to handle the increased demand for Granberg products east of the Mississippi.

FRED A. KAISER, *CHAIRMAN* • L. J. FRETWELL, *VICE-CHAIRMAN*

Gas exhibits spark two trade sho

Dick Keating of Keating of Chicago, Inc., describes the new high-speed isothermic gas oven to Julia Meade

Delegates to the 44th National Hotel Exposition visit the displays of the manufacturers and service companies that cooperated in A. G. A.'s gas

Hotel exposition

Several thousand hotel and restaurant men from all parts of the country saw some of the latest gas commercial cooking equipment during the 44th National Hotel Exposition held from Nov. 2-6 at the New York Coliseum.

A. G. A.'s Commercial Gas Exhibit featured displays by 15 manufacturers and service companies. Many of the displays incorporated live demonstrations.

A special event at the exposition was A. G. A.'s annual Commercial Gas Breakfast, which was held on Nov. 4 at the St. Moritz Hotel and was attended by some 150 hotel and restaurant men and editors. The featured speakers were Julia Meade and Dr. Howard B. Meek, dean of Cornell University's School of Hotel Administration.

During the breakfast, L. J. Fretwell, vice-chairman of the Industrial and Commercial Section, presented the 1959 awards for sales achievement in the gas industry's "Hi-Load" commercial water heating sales campaign to Thomas Z. Dunn, assistant commercial sales manager, The Ohio Fuel Gas Co., and Clarence W. King, commercial promotion manager, The Manufacturers Light and Heat Co.

Some of the highlights of the exhibit were high-speed ovens, infra-red broilers, and new automatic controls for cooking equipment.

The exhibitors and their principal displays were these:

Cecilware-Commodore Products Corp.—improved gas-fired coffee urns, portable hot food containers, and a combination gas grill-broiler unit.

Char-Rock Products—new one- and two-burner counter model gas-fired barbecue broilers designed for "in-view" cooking and insulated with rock wool for cool operation.

Cleveland Range Co.—commercial gas steam cookers with steam kettles designed for dual or individual operation.

Universal Chef Division of Cribben and Sexton Co.—a new cafe range with an elevated broiler, heavy-duty ranges in colored porcelain enamel, and steel griddles. An added attraction to this exhibit was a John Robert Powers model, who posed atop a Universal Chef range.

Duke Manufacturing Co.—a gas-fired hot food storage and serving unit and related hot food serving equipment.

Gas Consumers Service—a display of complete information on its facilities for scheduled service and maintenance on all types of gas equipment.

B. H. Hubbert and Sons, Inc.—gas-fired steam-jacket kettles, including a new trunnion tilting kettle.

Keating of Chicago, Inc.—gas deep fryers and a new high-speed gas oven described as an isothermic convection oven that offers drastic reductions in

baking time and in meat shrinkage, a smaller space requirement, and precise time and temperature controls.

Kewanee Industrial Washer Corp.—new and improved immersion-type commercial dishwashing units with self-contained gas water heaters capable of putting into action up to 400 gallons of hot water per minute.

Martin Oven Co.—large gas bake ovens, in which indirect firing produces such advantages as uniform heat distribution, moisture retention in sealed baking chambers, elimination of heat blast from opened oven doors, adaptability to steaming, and maximum combustion efficiency.

Middleby-Marshall Oven Co.—a large-capacity oven with vertically revolving trays that is designed for continuous and convenient loading and removal, simultaneous cooking of different foods, and extremely even cooking.

Robertshaw-Fulton Controls Co.—a new oven control that permits the minimum temperature setting to be 140° and allows the oven to be used for warming as well as cooking.

A. O. Smith Corp.—cutaway models of improved, compact, counter-high, high-capacity water heating units finished in colored enamel and employing copper for fins, coils, and tubes.

South Bend Range Corp.—a new gas-fired infra-red commercial double-deck broiler that reduces cooking time sharply, improves cooking quality, cuts meat shrinkage, and permits cooler operation by focusing heat in the form of infra-red rays generated by a special type of burner.

Southern Equipment Co.—an information booth.

Suburban Appliance Co.—the "Hickory-Q" infra-red gas rotisserie, which is similar in principle to the South Bend Range broiler and which features a revolving spit and a transparent glass door.

The featured speaker at the Commercial Gas Breakfast was Dr. Howard B. Meek (fifth from left), dean, Cornell University School of Hotel Administration

William Lotter (r.) of South Bend Range Corp. explains to delegates the operation of a gas-fired infra-red double-deck broiler

Metal exposition

A. G. A.'s Combined Industrial Gas Exhibit occupied nearly 200 feet of main aisle space in Chicago's International Amphitheatre at the 41st National Metal Exposition, held during the week of Nov. 2.

The exposition, sponsored by the American Society for Metals, covered almost every phase of the metalworking industry, in which industrial gas plays an important role in most processing operations.

Eight manufacturers of industrial gas equipment grouped under the Blue Flame banner in the gas exhibit. The exhibitors and their displays were these:

American Gas Furnace Co.—a continuous rotary retort furnace, a continuous shaker hearth furnace, and an operating display of a number of pattern flame burners.

John J. Fannon Products Co. and Perfection Industries Division—several types of infra-red heating and processing burners in full operation.

Gas Appliance Service, Inc.—an air heater, an operating brazing table, some heat processing equipment, and several burners and gas-air mixers.

Charles A. Hones, Inc.—"Buzzer" furnaces, one of which operates at 2,300° F. on atmospheric burners; a pot furnace; and a variety of burners.

The C. M. Kemp Manufacturing Co.—a new development for the production of pure hydrogen, protective atmosphere generators, and stereotype melters.

Selas Corp. of America—a high-purity H_2 generation and purification system, several types of radiant burners in operation, and automatic machines for heat treating, selective hardening, brazing, and soldering.

Spencer Turbine Co.—turbo-compressors used for gas combustion systems and an operating scale model of a pneumatic conveyor for handling all types of free-flowing materials.

A highlight of Metal Show Week was the 23rd annual Industrial Gas Breakfast sponsored by the Industrial and Commercial Gas Section at the La Salle Hotel for industrial gas engineers, equip-

Delegates to the 41st National Metal Exposition explore the displays included in A. G. A.'s Combined Industrial Gas Exhibit. The Exposition was conducted during the week of Nov. 2 in Chicago

ment manufacturers, and representatives of publications in the metalworking field.

Fred A. Kaiser, vice-president and general sales manager, Michigan Consolidated Gas Co., and chairman of the Section, presided at the breakfast.

Delegates were welcomed to the breakfast by Roy B. Munroe, assistant to the vice-president in charge of sales, The Peoples Gas Light and Coke Co., and Adolph O. Schaefer, president, Penn-Coyd Steel Forge Co., and a past president of the American Society for Metals. Peoples Gas Light and Coke was the host company.

During the breakfast, the Gas Appliance Manufacturers Association presented its distinguished service award to Harry R. Maxon, retired chairman and founder of Maxon Premix Burner Co. Because Mr. Maxon was ill and absent from the breakfast, the award was accepted by his son, Harry R. Maxon, Jr., who is president of Maxon Premix Burner. Robert C. LeMay, chairman of GAMA's industrial gas equipment division, presented the award and a citation. (See story on page 36.)

The guest speaker at the breakfast was William E. Haskell, assistant general superintendent of U. S. Steel Corp.'s South Works in Chicago. His address, entitled "Don't Pinch the Merchandise," criticized those who narrow the profit margins of private corporations.

If you pinch off the profits, Mr. Haskell said, there will not be any business. There is a need for profits in our free enterprise system, he explained, in order to install new equipment in our plants for more efficient production and in order to pay the investors who make capital expenditures possible.

Copies of Mr. Haskell's talk will be available soon from the Section.

During the week, a number of Section committees met in Chicago to plan their programs for 1960.

Special tax rules

(Continued from page 21)

there can be no discrimination. In applying these percentage tests, employees who have less than the minimum years of service required for participation (not exceeding five years) and employees who are customarily employed for less than 20 hours per week or for less than five months per year are excluded. If these percentage tests are not met, it must be established to the satisfaction of the commissioner of Internal Revenue that the coverage of the plan is not discriminatory.

Whether it is or not is a question of fact. Section 401(a) provides that coverage shall not be considered discriminatory merely because it is limited to salaried or clerical employees. However, such a classification would presumably be discriminatory if all employees included in the classification were more highly compensated than the employees excluded by such a classification.

Many savings plans are limited to salaried employees. Others include all nonunion employees. A minimum period of service, ranging from one to five years, is usually required. Minimum age requirements are sometimes imposed. Most plans require that the employee be a participant in the company's pension plan in order to be eligible for the savings plan. This points up the role of savings plans as a supplemental fringe benefit rather than a substitute for the usual pension plan.

The employee is normally permitted to specify the amount of his contribution within specified minimum and maximum percentages of his compensation. The maximum percentage generally ranges between 5 per cent and 10 per cent. Often, a maximum contribution is provided in order to limit the participation of the higher-paid employees. Normally, the company commits itself to make simultaneous contributions of between 50 per cent and 100 per cent of the employee contribution.

However, there are numerous possible variations. The company contribution may be a specified percentage of profits allocated among participating employees in proportion to their own contributions. Some consideration may be given to years of service in allocating the company contribution.

The plan may provide that company contributions shall be made in the company's stock. Under Section 401(a), the company contribution must not be allocated in a manner which discriminates in favor of the prohibited group. Variations in benefits in direct proportion to compensation are inherent and permissible. However, in a published ruling, the Internal Revenue Service noted that discrimination in benefits may result if employees are permitted to contribute more than 6 per cent of their compensation and company contributions are made in proportion to those of the employees. The Internal Revenue Service reasons that the relatively low-paid employees may well be unable to save more than 6 per cent on the average with the result that the company contributions received by the higher-paid employees as a group will be a greater percentage of their compensation than in the case of the lower-paid employees as a group. Whether discrimination of this kind results in practice is a question of fact in each case.

Employees are generally allowed to change the amount of their contributions at specified intervals, usually once every six months or once a year. Some plans allow employees to suspend contributions completely for a limited period of time, but not more often than twice in five years. Contributions are suspended automatically when the employee is on authorized leave of absence without compensation.

(Continued on page 26)

Continuous Catalytic Reforming process produces an oil-gas with a calorific value of 800 Btu per cubic foot

CCR set meets peak-shaving needs

By C. B. GLOVER

United Engineers and Constructors, Inc.

The Continuous Catalytic Reforming (CCR) process was originally developed in 1948 by The United Gas Improvement Co., in collaboration with United Engineers and Constructors, Inc., to reform natural gas catalytically to a carrier gas of approximately 300 Btu consisting essentially of CO + H_2. This carrier gas, when cold-enriched with natural gas, was suitable for a mixed gas sendout. Later developments included the use of LP-Gas and kerosene, as a replacement for natural gas, as hydrocarbons for reforming.

The first commercial unit was placed in operation in 1949. To date, 17 installations have been built in this country, and nine units are in operation, or have been contracted for, in Europe.

When it became evident that many of the gas utilities in this country were considering the conversion of their systems to straight natural gas, it was decided that there should be further experimental work with the CCR process in producing a catalytic oil-gas directly from the set.

Test work was carried out on a pilot plant scale unit with the use of both light oil and Bunker C oil. The calorific value of the gas produced ranged from 500 to 1,000 Btu per cubic foot.

The tests indicated that a higher yield of oil-to-gas could be secured when catalytically cracking the oil as compared to that secured with the conventional thermal processes; that, in some cases, catalytic oil-gas, in the 1,000 Btu range, appeared to be more substitutable for natural gas than high Btu oil-gas produced in thermal sets; and that catalytic cracking of oil to oil-gas reduces the sulfur content of the set gas substantially below that of thermal oil-gas.

With the background of the test operations of the pilot set, a commercial set was converted to the production of high Btu CCR oil-gas and was operated under test conditions for a sufficient length of time to obtain complete operating information. While the operating results were not quite so good as those obtained on the pilot plant unit, they were still substantially better than those obtained from thermal processes.

Because the tests made on a commercial unit proved the process to be sound and operable, Philadelphia Gas Works converted one of its existing hand-clinkered sets to the CCR process. The company used design features that made the process adaptable to the cracking of oil to a high Btu gas and to the reforming of natural gas to a carrier gas when necessary. This converted set became a part of the company's peak-shaving capacity and augmented the natural gas supply during periods of maximum sendout during the winter months.

During the past several winters, this set has operated as a peak load unit in the catalytic cracking of light oil to an oil-gas of about 800 Btu per cubic foot. When possible, the set was isolated from the rest of the gas-generating units: that is, it was put on a separate metering stream so that the results could be accurately measured.

To evaluate properly the results obtained in the catalytic cracking of an oil to high Btu oil-gas, it is necessary to compare such results with the cracking of the same quality oil in a thermal set.

During the winter of 1957-58, when diesel oil was used from the same tank for both catalytic cracking and thermal cracking processes, the following comparative operating results were obtained:

		Catalytic Oil-Gas	Thermal Oil-Gas
Make per set day	—Therms	40,000	43,000
Make oil yield	—Btu per gallon	110,000	92,000
Total oil yield	—Btu per gallon	92,400	80,000
H_2S in gas	—Grains/100 ft³ @ relief holder	0.42	14.8
Naphthalene in gas	—Grains/100 ft³ @ relief holder	< 0.50	3.3
Organic sulfur in gas	—Grains/100 ft³ @ relief holder	0.49	1.4

It may be noted that the yields of CCR oil-gas produced per gallon of oil used is substantially higher, as compared to the thermal process.

From the data given above, it should also be noted that the raw CCR gas at the outlet of the relief holder contains considerably less sulfur and naphthalene than does the thermally cracked gas.

During the winter of 1958-59, the CCR set was again operated for peak-shaving purposes and isolated on a separate metering stream when possible. During these operations, the feedstock for the CCR set was diesel oil and kerosene. The gasification value of the diesel oil used that year was not quite so good as that used the year before. This is

(This paper was presented at the Pennsylvania Gas Association's 1958-59 Production Conference in Drexel Hill, Pa.)

J. T. INNIS, *CHAIRMAN* · SAMUEL W. HORSFIELD, H. L. FRUECHTENICHT, *VICE-CHAIRMAN*

shown in the following tabulation, and again results from the cracking operation of a thermal set as given for comparison purposes.

Feedstock		Catalytic Diesel Oil	Catalytic Kerosene	Thermal Diesel Oil
Make per 24-hour day—Mcf		4,248	4,944	3,984
Btu		843	788	1154
Specific Gravity		0.69	0.64	0.75
Therms per 24-hour day		35,800	39,000	46,000
Make oil yield	—Btu per gallon	101,000	106,500	86,100
Total oil yield	—Btu per gallon	84,400	89,500	74,400
Gas Analyses:	% Ill	21.8	21.6	32.3
	% CO	12.7	12.3	0.5
	% H_2	35.3	34.7	18.7
	% CH_4	11.1	17.4	36.6
	% C_2H_6	5.3	2.0	2.5
	% CO_2	3.5	2.5	1.5
	% O_2	0.4	0.6	1.6
	% N_2	9.9	8.9	6.3
H_2S in gas	—Grains/100 ft^3 @ relief holder	0.020	0.018	Not Taken
Naphthalene in gas	—Grains/100 ft^3 @ relief holder	< 0.5	< 0.5	Not Taken
Organic sulfur in gas	—Grains/100 ft^3 @ relief holder	0.707	1.05	Not Taken

In terms of gas yield per gallon of diesel oil used, results for the last two winters are given as follows to show the relative quality of the oil used:

Year	1957-58		1958-59	
Process	Catalytic	Thermal	Catalytic	Thermal
Make oil yield—3tu per gallon	110,000	92,000	101,000	86,100
Total oil yield—3tu per gallon	93,000	80,000	84,400	74,400

It may be noted that in both years the catalytic process showed substantially better yields of oil-to-gas when compared to the thermal process.

Most of the operations on the CCR set have produced an oil-gas with a calorific value of about 800 Btu per cubic foot. During the latter part of this past winter, cracking conditions were changed to produce a CCR oil-gas of approximately 950 Btu per cubic foot. The following are the results secured from this operation with the use of diesel oil as feedstock:

Make per 24-hour day—Mcf		4,212
Btu		948
Specific gravity		0.74
Make oil yield	—Btu per gallon	98,400
Total oil yield	—Btu per gallon	83,400
Gas Analyses:	% Ill	26.5
	% CO	9.6
	% H_2	27.4
	% CH_4	23.8
	% C_2H_6	1.1
	% CO_2	2.6
	% O_2	0.5
	% N_2	8.5
H_2S in gas	—Grains/100 ft^3	1.86
Naphthalene in gas	—Grains/100 ft^3	< 0.5
Organic sulfur in gas	—Grains/100 ft^3	Not Taken

In all cases, when producing a CCR oil-gas of 800 to 1,000 Btu, the tar quality has been excellent and the degree of cracking has been thorough, as shown by a low sulphonation residue.

From the standpoint of practical operation and results secured, this CCR set is a dependable production unit that has certain advantages over thermal oil-gas processes in meeting peak-shaving requirements. This is true not only for those utility companies on a mixed gas basis but also for those in straight natural gas situations.

Special tax rules

(Continued from page 24)

The maximum amount allowable as an income tax deduction for company contributions to a profit-sharing or stock bonus plan is 15 per cent of the non-deferred compensation of participating employees. If the company maintains both a pension plan and a profit-sharing or stock bonus plan, the aggregate deduction for contributions to both is limited to 25 per cent of the non-deferred compensation of participants.

Some plans provide that both company and employee contributions shall be invested in company stock. Others provide that company contributions will be invested in company stock and employee contributions in government bonds. Still others require company contributions to be invested in company stock, and employee contributions to be invested, at the employee's option, in either company stock, government bonds, or stock of one or more specified investment companies.

Some plans allow the employee to direct the investment of both employee and company contributions in any one or more of several different funds maintained by the trustee. In at least one case, the plan provides for a company stock fund, a senior securities fund which is invested in bonds and preferred stocks selected by the trustee, and an equities fund which is invested in common stocks selected by the trustee.

Under these plans, employees specify the dollar amount, or percentage, of each contribution to be invested in the particular fund or funds at the time they elect to participate in the plan, and these instructions remain in effect until changed. Such changes may be made only at specified intervals, usually not more often than quarterly. Employees may also direct that amounts invested in one fund be transferred to another fund at specified intervals.

The only provision of Section 401(a) which bears on the investment of contributions is the requirement that the plan be maintained for the exclusive benefit of employees. Under the authority of this provision, the Internal Revenue Service requires a full disclosure of the reasons for any investments in stock or securities of the employer and of the conditions under which such investments are made. Such investments do not disqualify the plan unless the Internal Revenue Service determines that under the particular circumstances, the investments are made for the benefit of the company rather than the employees.

Individual accounts must be maintained to reflect the interest of each participant in the trust. Corporate trustees are reluctant to assume the accounting functions, and most plans provide that maintenance of employee accounts shall be the responsibility of an administrative committee appointed by the company.

There are two basic methods of accounting for employees' interests in the trust. Under the first, all contributions, purchases, sales, investment income, expenses, and distributions applicable to the particular employee are recorded in his account. Under the second, the employee's account is simply credited with units in this particular investment fund or funds, and the value of his interest is determined periodically by determining the value of the units.

For example, suppose the initial company and employee contributions to a fund total $10,000 and the value of the fund on the first valuation date is $10,100. Employee accounts are credited with one unit for each dollar of contribution made by, or on behalf of, the particular employee, and the value of a unit on the first valuation date is $1.01 ($10,100 ÷ $10,000). The "price" of a unit throughout the second accounting period is thus $1.01, and each dollar contributed will purchase only .9901 units. If it is assumed that total contributions during the second accounting period are again $10,000, and that the value of the fund on the second valuation date is $20,250, the value of a unit on that date would be $1.0175 ($20,250 ÷ (10,000 + 9,901).

An employee whose total contributions, including company contributions on his behalf, were $10 in each accounting period would have 19.9010 units worth an aggregate of $20.25 (19.9010 x $1,0175). This method of

(Continued on page 28)

7,963 dryers sold in seven weeks

Michigan Consolidated's dryer salesmen—(l. to r.) Don Mahon, Loren Major, Earl Young, Peter Giovannini, and Arthur Gill—receive awards from Ronald Kohl (r.) and Ira Rapson, company sales executives

A "total effort" sales campaign conducted by Michigan Consolidated Gas Co. and appliance dealers resulted in more gas clothes dryers being sold in a period of seven weeks than had been sold in the entire previous eight months.

Fred A. Kaiser, vice-president and general sales manager, said Michigan Consolidated and 470 cooperating dealers sold 7,963 dryers during the campaign from Sept. 1 to Oct. 17. This compares with 7,826 sold for the first eight months of 1959 and 4,069 sold during the comparable period last year.

Although Michigan Consolidated salesmen made up less than 5 per cent of the sales force, they accounted for 19 per cent of total sales. Company sales rose 130 per cent over the same period last year.

Mr. Kaiser, chairman, A. G. A. Industrial and Commercial Section, said that at the end of August, dryer sales in the Detroit district of the company were lagging 26 per cent behind last year. At the end of the campaign, dryer sales were up 14 per cent.

Michigan Consolidated devoted practically all of its advertising to dryers during the seven weeks. In Detroit, 894 column inches of dryer advertising were run in the three daily papers with a total readership of 27,528,000 persons. The ads ranged in size from 20 to 80 column inches. Forty-three weeklies reaching 6,544,000 readers ran 184 ads totaling 3,680 inches.

Dryers were also featured in thousands of inches of newspaper ads and radio and television spots sponsored by appliance dealers.

The theme of the advertising emphasized economy, drying in any kind of weather, less ironing and convenience.

The company used 957 one-minute spot announcements on 11 Detroit radio stations. These were directed at adult buyers and were timed for peak driving hours, in and around family music, news, sports and weather forecasts.

Approximately half of each commercial was devoted to Michigan Consolidated's singing jingle, "So much more for so much less—gas naturally." The 957 spots had a listening audience of some 22 million people.

Dryer cards appeared in 350 buses and on 850 company vehicles. In addition to a number of dryer messages carried on the company's huge word changing sign along the side of Detroit's John Lodge Expressway, 67 regular billboards were used.

Customer service department personnel gave brief dryer messages to customers calling the company. Mr. Kaiser estimates that through all these mediums, Michigan Consolidated made more than 123,600,000 impressions during the campaign.

No brand names were mentioned in

regular advertising, except in cases where the company cooperated with a distributor in sponsoring a radio commercial.

Michigan Consolidated offered a major customer incentive during the campaign by agreeing to install all dryers free of charge, including those sold by dealers. The company also furnished dealers with window displays, streamers, printed sales material, and assistance by the home service personnel in conducting demonstrations on dealers' sales floors.

Prior to the campaign, Mr. Kaiser; Roger Karcher, assistant sales manager; Ira Rapson, district sales manager; and other company sales officials held a dinner meeting to inform dryer manufacturers and distributors of the program. Milton Elert, superintendent of dealer coordination, and his staff met with the dealers in their offices to give pep talks and special sales booklets.

W. H. Glines, assistant district sales manager, worked out the advertising campaign with the company's agency, MacManus, John and Adams. Special cash awards were offered company sales personnel who exceeded their quotas. The Detroit sales force, under the direction of Ronald Kohl, general superintendent of retail sales, won the top five individual awards.

Five salesmen out of 40 accounted for more than 25 per cent of the sales in Detroit. Donald Mahon sold 65 dryers; Loren Major, 64; Earl Young, 57; Peter Giovannini, 48; and Arthur Gill, 46.

The largest percentage increase in company sales was made in the utility's northern districts. Sales Manager William Marion and his six small district offices earned the District Sales Manager Award for a 430 per cent increase over last year.

Over-all, the company's outstate districts showed a 248 per cent increase in sales. Milton G. Kendrick, administrative assistant to Mr. Kaiser, coordinated the outstate sales effort.

Despite all the concentration on dryers, sales of other appliances remained at normal levels, Mr. Kaiser said. He explained that salesmen were often able to sell a second appliance to a prospect after they had originally been contacted to purchase a dryer.

The dryer campaign, Mr. Kaiser said, was by far the most successful sales effort in his experience. "The enthusiasm built up among our own people and the dealers was tremendous. Nobody was out cutting throats on prices, just giving their best effort by making calls and closing sales," he added.

Special tax rules

(Continued from page 26)

maintaining employee accounts involves considerably fewer entries than the first method, even in cases where the fund is confined to one security.

If the fund is invested entirely in company stock that is to be distributed in kind, the number of shares to be distributed as of a particular valuation date is determined by dividing the dollar value of the employee's units in the fund by the value per share used in determining the value of the total fund on the particular valuation date.

The cost of maintaining employee accounts will depend to some extent upon the interval between valuation dates. There is no need to value the fund after each payroll period. However, the frequency of valuation dates determines the maximum period which an employee may have to wait following termination of employment for the value of his interest to be determined and distributed. For this reason, most plans using the unit accounting method establish valuation dates monthly or at least quarterly.

Most plans provide that an employee who leaves the company before he has participated in the plan for a specified minimum period shall forfeit part or all of the company's contributions and the earnings thereon. The minimum period varies, with five years being the most common. Some plans provide for percentage vesting of the employee's right to company contributions over a period of years. As previously stated, if the plan is classified as a pension plan, forfeitures must be applied to reduce the next succeeding company contribution. If it is classed as profit sharing or stock bonus plan, the forfeitures may be allocated among the remaining participants. No forfeiture will occur if termination of employment is caused by death, disability, or after attaining a specified retirement age.

Some plans permit employees to withdraw, while still in employment, a portion of their own contributions after a minimum period of participation and at stated minimum intervals thereafter. In some cases, the withdrawal options apply to a percentage of the employee's entire interest without being limited to his own contributions. No income tax is due on such withdrawals until the total withdrawn exceeds the total contributed by the employee. To the extent that withdrawals exceed employee contributions, they are taxed at ordinary income tax rates rather than as capital gain.

A plan which permits withdrawals prior to termination of employment will not qualify under Section 401(a) unless the withdrawal right is limited to contributions that have been held by the trust at least two years. Moreover, the Internal Revenue Service has ruled that a plan which qualified initially could become disqualified if the comparatively low paid employees withdraw all or a portion of their interests with the result that the plan becomes one which is operated primarily for the benefit of the prohibited group.

Plans classified as pension plans for tax qualification purposes may not permit withdrawals during employment. These restrictions on withdrawal rights do not apply to withdrawal by an employee of his own contributions in conjunction with termination of his participation in the plan.

If the plan provides an option to withdraw amounts in excess of the employee's own contributions, care must be taken to avoid the application of the doctrine of constructive receipt to employees who do not in fact make withdrawals. The Internal Revenue Service has ruled that an amount which an employee has a right to withdraw will be deemed to have been received by the employee in the year in which the right arises, unless the employee would incur a substantial penalty as a result of withdrawal, or unless he makes an irrevocable election prior to the time his interest becomes distributable to have the distribution deferred for a substantial period. An irrevocable deferral for a period of six months has been deemed not sufficient to preclude application of the constructive receipt doctrine.

Virtually all plans provide that an employee's entire interest in the trust shall be distributed to him, or in a proper case, to his beneficiary, upon termination of his employment on account of retirement, death or disability, or at any time after the employee's interest in company contributions has become fully vested. Most plans provide for full vesting after five to 10 years of participation. Distributions are generally made in cash except for investments in company stock, which are generally distributed in kind.

If employee accounts are maintained on a unit basis, it is necessary to determine the amount distributable on the basis of the value of the fund on the next following valuation date, thereby delaying distribution for a period possibly as long as the interval between valuation dates. In the case of lump sum distributions upon retirement, the income tax burden may be reduced if the plan allows the distribution to be deferred, at the option of the administrative committee, until the succeeding taxable year of the recipient.

If employment was prior to the vesting of the company's contributions, the employee is generally entitled to an amount equal to the greater of his own contributions but not more than the value of his account, and that portion of his account which is attributable to his own contributions. This gives the employee the benefit of any earnings attributable to his own contributions, and at the same time guarantees him against any losses to the extent of the company contributions made on his behalf which would otherwise be forfeited. There would seem to be no reason to guarantee such an employee the return of his contributions at the expense of other participants.

Industry news

New modified jet engine pumps natural gas

THE USE OF A MODIFIED JET ENGINE for pumping natural gas in a pipeline was recently announced jointly by United Aircraft Corp.'s Pratt and Whitney aircraft division of East Hartford, Conn., and Cooper-Bessemer Corp. of Mount Vernon, Ohio.

The modified J-57 engine will send its hot gases into a Cooper-Bessemer gas turbine and will convert the jet's thrust to commercially useful horsepower. The unit will deliver 10,500 horsepower.

Leonard C. Mallet, general manager of Pratt and Whitney, said that the J-57 had been altered to run on natural gas as a fuel instead of on the usual jet fuels.

The gas for the fuel will be drawn from the pipeline through which the unit is pumping.

A.G.A. welcomes Anchorage Gas Corp. as first Alaskan member

Robert B. Baldwin

ANCHORAGE GAS CORP. is A. G. A.'s first member company in Alaska. It was formed last March to furnish the Greater Anchorage area with gas service.

The company obtained franchises early this year from the City of Anchorage and the Spenard and Fairview public utility districts for the installation and operation of a gas distribution system. These franchises were ratified by voters in a general election on Oct. 6.

Preliminary market studies and feasibility reports are now being handled by Commonwealth Services, Inc., which has been retained as a consultant. As soon as the studies are conclusive, construction of the $5 million distribution system will begin. Present plans call for completion of the system within two years after that.

Anchorage Gas believes that more than enough natural gas will be available by 1961 to supply the Anchorage area. A preliminary contract has been negotiated with The Union Oil Co. of California and The Ohio Oil Co. for the purchase of their Kenai reserves. Officials of these firms believe that these reserves will be sufficient to meet the estimated requirements of Anchorage Gas for the 20-year terms of its franchises.

Gas will be piped to the Anchorage area in a 165-mile-long pipeline that will cost about $15 million. This figure includes the necessary gas gathering system from the wellheads and the dehydration facilities.

The corporate activities of Anchorage Gas are conducted in both Anchorage and Houston, Texas.

The directors of the company are Jack M. Barrett, Walter J. Hickel, Dr. Asa L. Martin, Paul F. Robison, Ken Sheppard, Albert C. Swalling, Frank Chilson, Robert B. Baldwin, George L. Gudenrath, William C. Smith, Jr., and Horace B. Webb.

The officers are Mr. Baldwin, president; Messrs. Webb, Chilson, and Robison, and D. N. Barrow, vice-presidents; Mr. Smith, treasurer; and S. Eastland, Jr., secretary.

Cascade Natural acquires Eastern Oregon Natural through merger

CASCADE NATURAL GAS CORP. has acquired Eastern Oregon Natural Gas Co. through a merger.

The transaction was announced jointly by C. Spencer Clark, chairman of Cascade, and Ernest W. Jorgensen, president of Eastern Oregon.

The merger, which has been approved by the boards of directors of both companies, is subject to approval by stockholders, the public service commissions of Washington and Oregon, and holders of certain senior securities.

Under the terms of the merger agreement, Mr. Jorgensen will become a director of Cascade and vice-president in charge of its Oregon operations. No other changes in personnel are anticipated.

Stockholders of Eastern Oregon will exchange their stock for that of Cascade on a share-for-share basis.

As a result of the addition of Eastern Oregon, Cascade will be serving about 14,000 customers and will have gross revenues for 1959 of approximately $9 million.

Supermarket uses gas to refrigerate, air condition, make electricity

WARD'S FOODLAND in Prescott, Ark., is one of the nation's few all-gas grocery markets.

The supermarket, which opened last fall, has a gas-operated combination refrigeration and air conditioning system. It also has a natural gas-driven generator that furnishes all of its electricity needs.

All of the supermarket's refrigeration equipment, except the sub-zero frozen food and ice cream cases, is cooled by a gas engine-driven compressor. The gas refrigerated equipment includes a large walk-in meat cooler; a small walk-in produce cooler; a 36-foot self-service meat case; a 24-foot vegetable case; and a 12-foot, triple-deck dairy case. These cases, which require a total of about nine tons of refrigeration, are standard; each, however, has a special thermostat attached to it.

The same gas engine-operated compressor provides 13 tons of comfort cooling for the 5,000-square-foot customer area.

The system operates with Freon-12 refrigerant, which is condensed to liquid in an evaporative condenser and distributed to the food preservation equipment via individual refrigeration lines running through a floor trench to each group of cases. The expanded Freon gas is then returned to the Ready-Power compressor by a common suction piping system.

A control system automatically actuates the compressor to satisfy refrigeration demands in any part of the system and automatically stops the gas engine either in case of a malfunction or when the demand is satisfied for all cases. Provision has also been made for timed defrosting of each group of cases; the walk-in coolers are manually defrosted.

The automatic changeover from summer to winter operation is achieved by an outdoor thermostat circuit. Engine speed modulates to balance the compressor capacity to the load at any time.

An alarm system rings a bell in the store's office in case of compressor failure. By means of a leased telephone circuit, the system also sounds an alarm at the home of the supermarket's owner, Everett Ward.

The supermarket is air conditioned all year around by one central air handling unit suspended above the ceiling at the rear of the store. A direct-expansion coil provides the 13 tons of cooling with two-stage thermostat control. A small hot-water coil furnishes winter heating: the hot water is circulated to the coil from a small package boiler in the equipment room. A duct system above the ceiling distributes cool and warm air through diffusers throughout the building.

All of the supermarket's electric power is provided by an "EM Amp-Pak" 50-kilowatt A-C generator (made by Electric Machinery Manufacturing Co., Minneapolis, Minn.) that is driven by a Waukeshaw natural gas engine.

Arkansas Louisiana Gas Co., which designed the refrigeration-air conditioning system and has contracted to provide routine preventative maintenance and 24-hour emergency service, has determined the total operating expense for a typical summer month to be about $63. This figure includes a little more than $50 for 118,000 cubic feet of natural gas, $2 for about two gallons of engine oil, and $11 for electricity (when the electricity was purchased from the municipal utility).

No cost data are yet available on the gas power generating system.

A.G.A. announces new publications issued during November

(The catalog number, which must be included with each order, appears after each publication as "Cat. No.")

RESEARCH

• **Noise Abatement at Gas Pipeline Installations** by James M. Sharp, Glenn Damewood, Cecil R. Sparks, and Miles T. Hanchett. $1.50. Cat. No. 29/PR.

• **Detection, Repair and Prevention of Leaks in Gas Distribution Systems,** by G. G. Wilson, D. P. Hogan, G. K. Matus, and D. A. Worcester. $1.50. Cat. No. 45/OR.

STATISTICS

• **Design of Questionnaires for Personal Interview Surveys.** Free. Cat. No. 54/S.

• **Sources of Data on Area Economic Characteristics.** Free. Cat. No. 55/S.

• **Monthly Bulletin of Utility Gas Sales, August 1959.** Free. Cat. No. 16h/S.

HOME BUREAU

• **Blue Star Paper Napkins.** $30 per case of 10,000 napkins, prepaid. Cat. No. 58/K.

• **Big Kitchen for Family Fun.** Reprint from *Ladies' Home Journal.* 7½ cents. Cat. No. 59/K.

ACCIDENT PREVENTION

• **Static Electricity.** 16 mm color films. $200. Cat. No. 40/AP.

• **Resuscitation Booklet.** 1-99 copies, 15 cents each; 100-499 copies, 12 cents each; 500 or more copies, 10 cents each. Cat. No. 41/AP.

INDUSTRIAL AND COMMERCIAL

• **1959 A. G. A. Industrial Gas School Lectures.** Bound volume. $6. Cat. No. 79/I.

• **Expanding Perlite for Use as a Lightweight Aggregate,** Information Letter No. 105. Free. Cat. No. 80/I.

• **Commercial Incineration,** Information Letter No. 106. Free. Cat. No. 81/I.

• **Market Analysis for Sales Direction,** Information Letter No. 107. Free. Cat. No. 82/I.

• **Spray Drying of Milk, Coffee, and Eggs,** Information Letter No. 108. Free. Cat. No. 83/I.

• **Who Specifies—Who Buys,** Information Letter No. 109. Free. Cat. No. 84/I.

LABORATORIES

• **American Standard Approval Requirements for Gas-Fired Absorption Summer Air Conditioning Appliances,** effective July 1, 1959. (UDC 697.9:696.2). $2. Cat. No. Z21.40-1959.

• **Addenda to American Standard Z21.13.1-1958 Approval Requirements for Central Heating Gas Appliances, Vol. I, Steam and Hot Water Boilers,** effective Jan. 1, 1960. (UDC 696.2:697.326). 25 cents. Cat. No. Z21.13.1a-1959.

• **Addenda to American Standard Z21.13.4-1958 Approval Requirements for Central Heating Gas Appliances, Vol. IV, Gravity and Fan-Type Vented Recessed Heaters,** effective Jan. 1, 1960. (UDC 696.2:697.382.4). 20 cents. Cat. No. Z21.13.4a-1959.

• **American Standard Approval Requirements for Domestic Gas Clothes Dryers,** effective Jan. 1, 1960. (UDC 648.3:696.2). $2. Cat. No. Z21.5-1959.

• **Addenda to American Standard Z21.13.2-1958 Approval Requirements for Central Heating Gas Appliances, Vol. II, Gravity and Forced-Air Central Furnaces,** effective Jan. 1, 1960. (UDC 696.2:697.382.1). 50 cents. Cat. No. Z21.13.2a-1959.

• **American Standard Approval Requirements for Central Heating Gas Appliances, Vol. III, Gravity and Fan-Type Floor Furnaces,** effective Jan. 1, 1960. (UDC 696.2:697.3). $2. Cat. No. Z21.13.3-1959.

• **Addenda to American Standard Z21.31-1958, Z21.31a-1959 Approval Requirements for Gas Counter Appliances,** effective Jan. 1, 1960. (UDC 662.76:531.73). 50 cents. Cat. No. Z21.31b-1959.

• **American Standard Approval Requirements for Hotel and Restaurant Gas Deep Fat Fryers,** effective Jan. 1, 1960. (UDC 64.024:683.9:696.2). $2. Cat. No. Z21.27-1959.

• **Addenda to American Standard Z21.34-1958 Approval Requirements for Gas-Fired Duct Furnaces,** effective Jan. 1, 1960. (UDC 662.95). 20 cents. Cat. No. Z21.34a-1959.

• **American Standard Approval Requirements for Domestic Gas Hot Plates and Laundry Stoves,** effective Jan. 1, 1960. (UDC 683.9:643.58:696.2). $2. Cat. No. Z21.9-1959.

• **Addenda to American Standard Z21.6-1957, Z21.6a-1958 Approval Requirements for Domestic Gas-Fired Incinerators,** effective Jan. 1, 1960. (UDC 696.2:696.139). 25 cents. Cat. No. Z21.6b-1959.

• **Addenda to American Standard Z21.28-**

Utah cemetery installs gas lighting, heating

OUTDOOR GAS LIGHTS have been installed to illuminate the statuary and chapel-administration building at the Memorial Gardens of the Valley, a new private cemetery located at the foot of the Wasatch mountains southeast of Salt Lake City, Utah.

The cemetery is the first in Utah to use natural gas lighting, according to S. E. Cowan, new business manager, Mountain Fuel Supply Co. It is also said to be one of the few cemeteries in the country to use the lighting so extensively.

Officials of the cemetery, who chose natural gas lighting "because of its soft glow and peaceful atmosphere," also chose natural gas for heating and air conditioning the chapel-administration building.

The cemetery is in its early stages of development: only about 22 acres of its more than 70 acres have been landscaped and divided. The cemetery plans to develop the grounds as a series of individual religious floral gardens, each of which will be dominated by a centrally located religious statue.

This religious figure, which stands in the Memorial Gardens of the Valley—a new cemetery located southeast of Salt Lake City, Utah, at the foot of the Wasatch mountains—is illuminated at night by the natural gas lights at its base. The chapel-administration building, which is visible in the background of the photograph, is heated and air conditioned with natural gas

1956, Z21.28a-1957 Approval Requirements for Portable Gas Baking and Roasting Ovens, effective Jan. 1, 1960. (UDC 643.33). 50 cents. Cat. No. Z21.28b-1959.

• American Standard Approval Requirements for Domestic Gas Ranges, Vol. I, Free-Standing Units, effective Jan. 1, 1960. (UDC 643.33:696.2). $2. Cat. No. Z21.1.1-1959.

• American Standard Approval Requirements for Domestic Gas Ranges, Vol. II, Built-In Domestic Cooking Units, effective Jan. 1, 1960. (UDC 643.33:696.2). $2. Cat. No. Z21.1.2-1959.

• Addenda to American Standard Z21.3-1956, Z21.3a-1957 Approval Requirements for Hotel and Restaurant Gas Ranges and Unit Broilers, effective Jan. 1, 1960. (UDC 696.2:683.9:64.024). 50 cents. Cat. No. Z21.3b-1959.

• American Standard Approval Requirements for Gas-Fired Room Heaters, effective Jan. 1, 1960. (UDC 644.1:696.2). $2. Cat. No. Z21.11-1959.

• Addenda to American Standard Z21.16-1957, Z21.16a-1958 Approval Requirements for Gas Unit Heaters, effective Jan. 1, 1960. (UDC 696.2:683.9). 20 cents. Cat. No. Z21.16b-1959.

• American Standard Approval Requirements for Gas Water Heaters, Vol. I, effective Jan. 1, 1960. (UDC 683.97:696.2). $2. Cat. No. Z21.10.1-1959.

• American Standard Approval Requirements for Gas Water Heaters, Vol. II, Side-Arm-Type Water Heaters, effective Jan. 1, 1960. (UDC 683.97:696.2). $2. Cat. No. Z21.10.2-1959.

• Addenda to American Standard Z21.17-1958 Listing Requirements for Domestic Gas Conversion Burners, effective Jan. 1, 1960. (UDC 663.95). 20 cents. Cat. No. Z21.17a-1959.

• Addenda to American Standard Z21.24-1955, Z21.24a-1956 Listing Requirements for Metal Connectors for Gas Appliances, effective Jan. 1, 1959. (UDC 696.2:621.-643.3/.4). 20 cents. Cat. No. Z21.24b-1959.

• Addenda to American Standard Z21.15-1958 Listing Requirements for Manually Operated Gas Valves, effective Jan. 1, 1960. (UDC 696.2:621.646.2). 20 cents. Cat. No. Z21.15a-1959.

• American Standard Installation of Gas Appliances and Gas Piping, 1959. (UDC 696.2:69.009.182). 50 cents. Cat. No. Z21.30-1959.

(The individual prices listed above apply for one to nine copies. Orders for larger quantities of each single publication will be filled at these discount prices: 10-49 copies, 15 per cent off; 50-99 copies, 20 per cent off; 100-499 copies, 25 per cent off; 500 or more copies, 33⅓ per cent off.)

COMMERCIAL PROMOTION

• Why I Specified Gas Air Conditioning. Sound-slide film. $25. (Available next month.) Cat. No. 40/C.

GENERAL MANAGEMENT

• Today's Investment in Tomorrow's Growth, by Dr. J. T. Rettaliata. Free. Cat. No. 44/G.

• 1959 Observations on Excess Liability Insurance for Gas Utilities, by Joseph E. Johnson. Free. Cat. No. 45/G.

• Executive Development in Selected Universities and Associations (Northeastern United States, by the A. G. A. Personnel Committee. Free. Cat. No. 46/G.

PROMOTION

• 1960 Gas Clothes Dryer Display: Fluffy the Kitten. $8 (F. O. B. Chicago). Cat. No. 64/P.

• 1960 Spring "Gold Star" Gas Range Display: Pointing Girl. $8 (F. O. B. Chicago). Cat. No. 65/P.

• Optional Package Display: two tie-in counter cards, two streamers, and four easel cards. $10.05 (F. O. B. Chicago). Cat. No. 65a/P.

• 1960 Gas House Heating Display: Typical Town "Day-Glo." $5.80 (F. O. B. Chicago). Cat. No. 66/P.*

• 1960 Gas Air Conditioning Display: Mobile Monkey, Swinging Arm. $8.15 (F. O. B. Chicago). Cat. No. 67/P.*

• 1960 Gas Incinerator Display: Moving Housewife. $8.10 (F. O. B. Chicago). Cat. No. 68/P.*

• 1960 Fall "Gold Star" Gas Range Display: three-dimensional "Flame-Kissed" exhibit. $6.45 (F. O. B. Chicago). Cat. No. 69/P.

• Optional Package Display: two wall and window streamers, two counter cards, and four easel cards. $8.50 (F. O. B. Chicago). Cat. No. 69a/P.

• 1960 Gas Light Display: Sign Post. $3.35 (F. O. B. Chicago). Cat. No. 70/P.*

• Doris Day Whirlpool Display. Order from RCA Whirlpool distributor. $9.75. Cat. No. 71/P.*

• Norcold Floor Display. Order from Norco, Inc., 5111 W. Washington Boulevard, Los Angeles 16, Calif. Cat. No. 72/P.*

• Kirk Floor Display. Order from Kirk Industries, Inc., South Norwalk, Conn. Cat. No. 73/P.

OPERATING

• Bibliography on Cast Iron Pipe. 25 cents. Cat. No. OP/59/3.

• Relative Costs of Transmission of Pipeline Gas, by C. G. vonFredersdorff. 25 cents. Cat. No. CEP/59/18.

• Nuclear Energy for Gasification of Coal, by J. P. McGee and Sidney Katell. 25 cents. Cat. No. CEP/59/19.

• Significance of Fuel Cell Research to the Gas Industry, by R. B. Rosenberg. 25 cents. Cat. No. CEP/59/20.

• Foaming Agents for Removal of Liquids from Gas Wells, by H. N. Dunning, J. L. Eakin, W. N. Reinhardt, and C. J. Walker. 25 cents. Cat. No. OS/59/1.

• Report of Operating Section Activities, by H. C. Jones. 25 cents. Cat. No. OS/59/50.

• Well Completion and Cementing Practices. Available on a loan basis. Cat. No. OP/59/L/1.

• Well Stimulation Practices. Available on a loan basis. Cat. No. OP/59/L/2.

** 5 per cent discount is allowed on display if year-around display service is ordered.*

Committee urges United States-Canadian pact on natural gas

THE NATIONAL PLANNING ASSOCIATION has issued a report calling for a United States-Canadian treaty to facilitate and speed the flow of natural gas across the border of the two nations.

The report was prepared by the Canadian-American Committee, which was established in 1957 by the National Planning Association and the Private Planning Association of Canada in order to study Canadian-American relations.

The report proposed serious exploration of more effective and flexible solutions to the natural gas question and suggested that "broad matters of policy be discussed between the two countries."

If a substantial measure of agreement could be reached by such discussions, the committee stated, "this agreement should be given binding expression by both Ottawa and Washington."

The report said that "it is clear that Canada and the United States will eventually be covered by vast networks of pipelines. What is more logical than that they be closely interconnected?" it asked.

The committee noted that more attention should be devoted to the question of trans-border cooperation and less to the dangers of diminishing supplies of natural gas. "Neither Canada nor the United States is in any immediate danger of running out of natural gas," it said.

The report offered the following fundamental principles upon which a sound and beneficial growth in natural gas trade should be based:

• Arrangements for setting aside reserves sufficient to look after the reasonably foreseeable needs of each country.

• Guarantees by the exporting country of continuity of supply to the best of its ability for periods of time clearly stated in advance.

• Any prices decided upon by both the exporting and importing utilities and approved by proper authorities in the country of origin should be accepted as given, and any proposal being considered should be passed upon the basis of its economic value to the consuming public in the importing country.

• Such by-products of natural gas production as cannot be disposed of locally should also enjoy relative freedom of movement either way across the international boundary.

The committee is composed of 60 representatives of business, labor, agriculture, and professional interests in both countries.

Con Edison wins suit against FPC; may buy Texas gas for boiler fuel

THE FEDERAL POWER COMMISSION has been ordered to issue a certificate of public convenience and necessity under which Consolidated Edison Co. of New York, Inc., would be enabled to buy natural gas in Texas.

The order was handed down in Philadelphia on Nov. 3 by the United States Court of Appeals for the Third Circuit. It set aside a previous ruling of the FPC that had denied the certificate. The order was written by Chief Judge Herbert F. Goodrich and concurred in by Judges Austin L. Staley and William H. Hastie.

Con Edison had been joined in the appeal by the City of New York and Transcontinental Gas Pipe Line Corp. (Transco).

Those who had joined the FPC as intervenors were the National Coal Association, the United Mine Workers, and the Fuels Research Council, Inc.

Judge Goodrich, in his opinion, said that the essential facts in the case were these:

"Con Edison went into Texas and made a contract with producers for the purchase of natural gas in the Texas field. Then it made an agreement with Transco providing for what is called 'X-20 service.'

"Transco agreed to transport the gas to New York and deliver it to Con Edison.

"Con Edison agreed with the producers not to sell this gas at retail in New York. It is to be used to fire two of the 10 boilers in Con Edison's waterside plant near 42 Street and East River in New York City.

"The City of New York is interested in the litigation, because by the substitution of gas for coal, now being used to fire the boilers which Con Edison has at this plant, the very considerable amount of fly ash and the very considerable amount of sulphur dioxide poured into the air in this densely populated portion of New York City will be greatly reduced."

The FPC, the Appellate Court noted, refused to issue the certificate of public convenience for these reasons:

- If the certificate were granted, the FPC would soon be confronted with many requests of similar natures.
- The granting of the certificate would pre-empt the use of capacity that would otherwise be available to meet more urgent and widely beneficial public needs.
- The impact of large demand on relatively limited supply was certainly enough to raise rate and field prices if, in the words of the FPC, "only one bidder is bringing that demand to bear on the supply."
- Con Edison would be in a better bargaining position than smaller purchasers.

Judge Goodrich, who brushed aside all of the objections, wrote that all parties agreed that the purchase of gas in Texas by Con Edison was not subject to the jurisdiction of the FPC.

"Con Edison," the opinion continued, "can buy as much gas as it can pay for in Texas and there is nothing the commission can do about it. The same is true of the use which Con Edison makes of this gas when it gets to New York.

"Since it is not to be the subject of resale in that state, the commission has nothing to say about its use either."

The court returned the case to the FPC with instructions to issue the certificate, subject to further hearings on the minor question of rates.

An editorial in the Nov. 10 edition of *The New York Times* commended the court's decision as follows:

"Use of natural gas instead of coal in generation of electric power can be increased and the contamination of New York City's air reduced under an order handed down by the United States Court of Appeals for the Third Circuit, in Philadelphia. The Consolidated Edison Company has been using gas in some boilers. This was so-called 'valley gas,' the surplus available under level contract when demand from gas-heat customers was light. When the company attempted to buy gas in Texas to be transmitted by pipeline for the specific purpose of generating power, rather than for resale to retail customers, it ran into a refusal by the Federal Power Commission, which was joined in court defense by coal industry and mine union interests. The court reversed the FPC decision.

"Now, unless the issue is carried to the Supreme Court, Consolidated Edison will be able to use gas in greater quantity year-round for some older boilers, and thus reduce smoke and fly ash, especially in the neighborhood of the United Nations. The city's Department of Air Pollution Control was an interested party in this litigation and therefore shares with Consolidated Edison in public congratulations."

Brooklyn Union awards $1,000 in bake-off

Mrs. Charles E. Shaw won $1,000 and a Universal range in The Brooklyn Union Gas Co.'s recent "Gold Star" pie and cake contest. She was named grand prize winner after the finals, which were held on Nov. 4 at Staten Island, N. Y. The contest was co-sponsored by "The Staten Island Advance." During the time the cakes were being baked, the audience of nearly 2,800 was entertained by Rudy Vallee, Herb Shriner, Julia Meade, Ray Heatherton, Pat Hernon, and Eddie Safranski and his orchestra. Proceeds from the sale of tickets went to the Visiting Nurse Association. Mrs. Shaw won with a banana spice cake with seafoam frosting. The other finalists and their prizes were Mrs. Marion Galiley, a Hardwick range; Mrs. Allen C. Bennett, a Caloric range; Mrs. Sigmund A. Grajewski, a Roper range; and Mrs. Edward D'Alessandro, a Magic Chef range. Pictured is the final judging

Lone Star sets safety mark

LONE STAR GAS CO.'S 563 West Texas distribution region employees completed one million man-hours without a lost-time injury during the 10-month period from Dec. 6, 1958, to Oct. 16, 1959. The record is the first such achievement for a major field distribution unit in the company's history. It is, however, the seventh million-hour record attained by individual units in the company's 50-year existence. The West Texas region includes 108 towns in 15 districts.

Peoples Gas System praised

A CERTIFICATE OF APPRECIATION "of the three million members of The American Legion" was presented recently to Peoples Gas System of Florida in recognition of its policy of employing physically handicapped veterans. The award was given to Phillip C. Crowen, president of Peoples Gas, by E. A. Blackmore, national adjutant of the Legion. Of the utility's 418 employees, 21 are physically handicapped and 19 of these handicapped are veterans.

Clark outlines 3-point program for INGAA at group's annual meeting

THE INDEPENDENT NATURAL GAS ASSOCIATION OF AMERICA held its annual meeting from Oct. 25-27 at the Westward Ho Hotel in Phoenix. The theme of the association's national meeting was "The Public's Stake in the Natural Gas Business."

During the business luncheon, Glenn W. Clark, president of INGAA, outlined a three-point program for the association in the coming year.

The points were these: continued efforts to remove the production of natural gas from utility-type regulation; cooperative efforts to obtain appropriate changes in the rates of return and rate base policies of the Federal Power Commission to compensate for the increase in interest rates and to permit gas companies to compete for capital funds; and opposition to efforts of the coal industry to limit sales of gas by legislation.

Mr. Clark noted that INGAA has been instrumental in obtaining the cooperation of other organizations in the oil and gas industries in an effort to block moves in Congress to formulate a national fuels policy.

Such a policy, he said, would have as its purpose the control of the end use of fuels. This control, he explained, would limit the sales of gas for industrial uses, would prevent the expansion of industry into noncoal areas, and would mean increased costs to household users.

Other speakers at the INGAA meeting were John F. Childs, vice-president and head of the public utility department, Irving Trust Co., who discussed "Problems of Fair Rate of Return"; Dr. Cecil L. Dunn, manager, rate department, Southern Counties Gas Co., who considered "The Public Interest in Industrial Gas Sales"; L. R. Boulware, vice-president, General Electric Co., who talked about "What's Been Added to Our Jobs"; and The Honorable H. Roe Bartle, mayor, Kansas City, Mo., who advised the delegates to "Stand Up and Be Counted."

Northern Illinois Gas opens new $12 million, 140-mile, 22-inch pipeline

BRIEF CEREMONIES on Oct. 22 marked the official turn-on of Northern Illinois Gas Co.'s new 140-mile, 22-inch East Dubuque, Ill., to Des Plaines pipeline.

The new line will bring an additional 50 million cubic feet of natural gas daily to the company's 20-county service area this winter. The gas will come from Northern Natural Gas Co., which extended its system from Dubuque, Iowa, across the Mississippi River to meet the new Northern Illinois facilities eight miles southeast of East Dubuque.

Participants in the turn-on ceremony included George R. Perrine, chairman of the Illinois Commerce Commission; Marvin Chandler, president of Northern Illinois; and John F. Merriam, president of Northern Natural.

The new pipeline, which was started late in June, cost $12 million. Its completion marked the second large supply addition that Northern Illinois has received from new pipelines this fall. Early in October, Midwestern Gas Transmission Co. turned on its new Tennessee to Joliet, Ill., pipeline, which will supply Northern Illinois with 60 million cubic feet of natural gas daily.

The two new gas supplies, which represent an increase of 28 per cent in this year's Northern Illinois pipeline supply over last year's, have enabled the utility to authorize 127,500 new home space heat installations. They have also allowed Northern Illinois to catch up with its residential heating list and to offer gas heat to nonresidential customers on a limited basis.

Trane Co. introduces completely hermetic absorption cold generator

A NEW, COMPLETELY HERMETIC absorption cold generator has been introduced by The Trane Co., La Crosse, Wis. The generator is powered by low-pressure steam and uses water as a refrigerant with lithium bromide as the absorbent.

The new absorption unit has capacities from 100 to 350 tons and is well suited for single or multiple unit installations.

Incorporating major design improvements, the compact, fully automatic unit is designed to be completely hermetic. Single-shell design and hermetic pumps prevent air leakage to maintain full-rated capacity and resist oxidation. Because the hermetic design and simplified purge system require the purging of air from the machine only a few times a year, maintenance is cut to a minimum.

The unit uses a control system that operates the machine at conditions which avoid crystallization. Should crystallization occur, however, because of short periods of power failure, the unit is designed to free itself, once normal conditions are restored.

The unit is lightweight, quiet, and nearly vibration-free. It can be installed in almost any location where the actual weight of the unit can be supported. Absorption refrigeration can be used for comfort conditioning in such buildings as hotels, apartments, offices, hospitals, and department stores, and for industrial processing and cooling.

The unit has single-shell construction, which reduces its over-all size and permits installation in areas with low ceilings. A vacuum bottle principle of the external shell design makes insulation unnecessary for most installations.

Since it is designed and fabricated for maintenance and accessibility from either end, the unit can be placed with one end against the wall. Installation time and cost are reduced to a minimum, because the unit is fully piped and wired and is complete with controls, including pump motor starters. Finally, the fully automatic operation eliminates the need for a full-time operator.

Washington Gas Light wins safety award

Donald S. Bittinger (third from left), president, Washington Gas Light Co., presents an A. G. A. million-man-hour safety merit award to Donald E. Ryan, safety engineer. The company won the award for working from June 8 to Sept. 1 without a lost-time accident. Other participants in the presentation are (l. to r.) C. W. Wenger, chairman, transmission and distribution department safety team; A. M. Richardson, chairman, service department safety team; R. M. Browning, chairman, general offices safety team; and R. E. Parker, chairman, other operations safety team

Robertshaw-Fulton designs low-temperature warming oven control

A NEW TEMPERATURE CONTROL system designed by Robertshaw-Fulton Controls Co. for gas range ovens enables foods to be held at warming temperatures without continuing to cook. This warming temperature was not previously possible, because of higher minimum settings.

The company has called the new range control "an important development for the homemaker, giving her additional flexibility in meal preparation and enabling her to take part in pre-meal relaxation, which has become a part of the trend to more casual living."

The new system means, for example, that a homemaker will be able to cook a roast to precisely the desired doneness, reset the oven temperature dial, and keep the meat at the exact serving temperature. The meat will not continue to cook and, as a result, go, for instance, from medium rare to well done.

Or, for example, an entire meal can be prepared in the oven or on the top burners well in advance of the dinner hour and kept at the perfect serving temperature until serving time. The low temperature will allow the preservation of the desired degree of doneness, because overcooking cannot occur.

C. S. Stackpole, managing director of A. G. A., said, "This new low temperature oven control system makes the modern gas range infinitely more versatile, and suggests to the homemaker exciting new ideas for preparation of her family's meals. We consider it a very important advance in the gas and gas range industries."

The new control system is now in production at the Robertshaw thermostat division. At least 18 range manufacturers are incorporating the control in their 1960 models.

Company officials explained that, in the past, the lowest possible oven temperature setting was 250°. At this temperature, cooking continues; so a properly cooked food held in a conventional oven set for 250° will emerge overcooked, unless the serving time is precisely observed.

For example, a roast is cooked medium rare when its internal temperature reaches 150°. Once that temperature is reached, turning down the old thermostat to the lowest setting, 250°, does not stop the cooking process. The new system reduces the minimum setting to 140° and permits food warming for extended periods.

The new temperature range is also said to be valuable for quicker defrosting of frozen foods. A large frozen turkey, for instance, can be thawed in three hours, compared to the usual 14 hours at room temperature. Thawing at higher temperatures in the conventional oven would shrink and partially cook the turkey.

The new control system, which is based on a vapor-pressure principle, is said to hold oven temperatures within precise limits never before possible. The device permits almost perfect straight-line temperature control with little or no variation.

Highlights of cases before the Federal Power Commission

Bureau of Statistics, American Gas Association

Certificate cases

● **American Louisiana Pipe Line Co.** has filed a budget-type construction application to facilitate attaching newly available supplies. The total cost of the proposed facilities is not to exceed $3 million; each single project is limited in cost to $500,000.

● **Lone Star Gas Co.** has filed a budget-type construction application for facilities to attach new gas supplies at a total cost of $1 million. Each project is limited to a cost of $250,000.

● **Michigan Wisconsin Pipe Line Co.** has received approval of a $24.2 million project that will enable it to transport 158 million cubic feet daily of Canadian natural gas to be purchased from Midwestern Gas Transmission Co. The facilities to be constructed include a 97-mile pipeline from Marshfield to Appleton, Wis.; a 96-mile extension to Menominee, Mich.; 118 miles of lateral lines; 65 miles of loop line; and a 5,280-horsepower compressor station. The new supply of gas will meet the growing demand from 23 existing customers in Michigan and Wisconsin, provide new gas service to the northern part of Michigan and central Wisconsin, and furnish a supply to six intervening distributing companies in Iowa and to one intervening distributing company in Missouri.

● **Midwestern Gas Transmission** has been authorized to construct a 504-mile pipeline for the importation of 204 million cubic feet daily of Canadian natural gas, provided that the necessary Canadian authorizations for the export of gas can be obtained. The new pipeline will extend from the United States-Canadian border near Emerson, Manitoba, to Marshfield, Wis., where it will connect with Michigan Wisconsin Pipe Line's system. The over-all cost of this project, including 56 miles of lateral lines and two 5,280-horsepower compressor stations, is estimated at more than $52 million. The imported gas supply has been allocated to Michigan Wisconsin Pipe Line, Montana-Dakota Utilities Co., Northern States Power Co., United Petroleum Gas Co., and nine Minnesota communities.

● **Mountain Fuel Supply Co.** has been authorized to construct and operate about 24 miles of 20-inch pipeline at an estimated cost of $1.5 million. The new line, which will extend from Coalville, Utah, into Wyoming and will parallel an existing line, will enable the company to meet the normal growth of present markets.

● **Northern Natural Gas Co.** has filed a budget-type application to construct up to $4 million in pipeline facilities to enable it to secure available gas supplies from numerous small producing areas in Texas, Oklahoma, and Kansas. Each single project may not exceed $500,000 in cost.

● **Panhandle Eastern Pipe Line Co.** has applied for authority to conduct storage and production testing operations at the Waverly storage field. The total estimated cost of these operations, including requisite facilities, is about $5 million.

● **Permian Basin Pipeline Co., Pioneer Gathering System, Inc., and El Paso Natural Gas Co.** have received authorization, in a decision filed by Presiding Examiner Frazee, to construct natural gas facilities designed to take natural gas produced from fields in Texas. The cost of the facilities to be constructed by Permian Basin Pipeline is estimated at $4.7 million. These facilities include about 85 miles of pipeline and a 3,960-horsepower compressor station. Pioneer Gathering System's facilities will cost approximately $3.7 million. El Paso Natural Gas' facilities are estimated at a cost of $849,000. Pioneer Gathering System will deliver 38.6 million cubic feet of natural gas daily to Permian Basin Pipeline. It will also transport about 12.7 million cubic feet daily for El Paso Natural Gas. The plans of El Paso Natural Gas include the transportation of gas owned by Pioneer Gathering System.

● **Texas Gas Transmission Corp.** has sought authority to acquire the West Greenville gas field from Western Kentucky Gas Co. and to convert it to a storage field. The estimated cost of this project—including nearly 30 miles of connecting lines, a 1,760-horsepower compressor station, and other facilities—will be approximately $2.5 million.

● **Transcontinental Gas Pipe Line Corp.** has proposed a budget-type application to connect new gas reserves to the system at an over-all cost of not more than $1 million. Each single project is limited in cost to $250,000.

Rate cases

● **Panhandle Eastern Pipe Line's** proposed $8.6 million, or 8 per cent, annual wholesale natural gas rate increase has been suspended. This increase would affect 61 utility customers in Kansas, Missouri, Indiana, Illinois, Ohio, and Michigan, and would be in addition to two prior rate increases totaling $19.2 million and currently being collected, subject to refund. The company cited higher wage and tax costs, increased costs of purchased gas, and the need for a 7 per cent rate of return. For its own gas production, a commodity-value price was requested, in lieu of actual costs, as a price determinant.

● **Tennessee Gas Transmission Company's** filing for a proposed $26.6 million, or 10.0 per cent, annual wholesale natural gas rate increase has been suspended. A public hearing will begin on Dec. 15. If these proceedings are not concluded by April 5, 1960, the new rates will be collected, subject to refund, from approximately 100 wholesalers in Alabama, Connecticut, Kentucky, Louisiana, Mississippi, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Tennessee, and West Virginia. Two other suspended increases totaling more than $43 million continue to be collected, subject to refund. As a basis for the latest proposal, the company claimed a 7 per cent rate of return and the need to recover higher purchased gas costs, cost of capital, taxes, and higher operating costs. The FPC also suspended proposed rate increases of two Tennessee Gas Transmission customer companies—Alabama-Tennessee Natural Gas Co. and Tennessee Natural Gas Lines, Inc.,—whose applications were based on this filing.

In another FPC action, an application by **Blue Ridge Gas Co.** seeking a supply of natural gas from Atlantic Seaboard Corp. was again approved. Prior approval granted to the company had been set aside by the United States Court of Appeals, because the FPC had not permitted a group of petroleum jobbers to intervene.

In another decision, filed by Presiding Examiner Frazee, **Northern Natural Gas** was authorized to sell natural gas on both a firm and an interruptible basis to the Cornbelt Power Cooperative of Humbolt, Iowa. Although coal intervenors claimed that the use of natural gas for electric generation would reduce the annual tons of coal consumed from 124,000 tons to 36,000 tons, the commissioner stated that the resultant saving of $5.70 a year for each of the cooperative's 30,000 farm families would be in the public interest.

In an attempt to simplify its corporate structure, **The Peoples Gas Light and Coke Co.** has offered to acquire the outstanding minority interest of its 70 per cent owned subsidiary, Texas Illinois Natural Gas Pipeline Co. If the attempt is successful, the assets of Texas Illinois Natural Gas Pipeline will be transferred to Peoples Gulf Coast Natural Gas Pipeline Co., a newly formed, wholly owned subsidiary. Ultimately, it is hoped that the new subsidiary and another wholly owned subsidiary, Natural Gas Pipeline Co. of America, will be merged into one organization.

Gas industry's net income totals record $692,000,000 in 1958

THE NET INCOME of the gas utility and pipeline industry totaled a record high of $692 million last year, according to A. G. A.'s final summary of 1958 statistics.

The industry's net income represented a 6.8 per cent gain from the $648 million recorded in 1957. The income of pipeline companies alone totaled $252 million in 1958, a rise over the $246 million in 1957.

The total operating income from all sources in 1958 was $7,106 million, up 10.8 per cent from 1957. Utility operating income in 1958 was $922 million, up 9.5 per cent over 1957. The industry's net plant increased in value from $13,295 million in 1957 to $14,255 million in 1958.

The relationship between utility operating income and net utility plant (the largest factor used in determining the rate base) indicates an approximate return of 6.5 per cent in 1958. The 1957 rate was 6.3 per cent.

Interest on the industry's long-term debt increased 16.8 per cent: it climbed from $268 million in 1957 to a new peak of $313 million in 1958. Expressed as a percentage of average long-term outstanding debt, the 1958 interest rate was 3.93 per cent, higher than the 3.77 per cent rate in 1957.

New security issues, including those of combination gas and electric companies, advanced 2.5 per cent in 1958 to a record high of $2.48 billion. Of this figure, $1.86 billion represented debt issues.

Interest rates were generally lower in 1958 than in 1957. The new preferred stock issues of straight gas companies cost 5.47 per cent in 1958, compared with 5.78 per cent in 1957. Bond money cost 4.95 per cent in 1958, lower than the 5.06 per cent in 1957. Debentures sold at an average interest rate of 4.78 per cent in 1958, in contrast to 5.37 per cent in 1957.

The gas industry's tax bill continued to climb: it reached a record $863 million paid during 1958. These taxes, up 8.8 per cent from 1957, were 24.7 per cent greater than the net income available for stockholder dividends and capital improvements.

Gas industry revenues from sales to ultimate customers increased 10.5 per cent in 1958 above 1957 levels. These revenues totaled $4,568 million, a new record high. The industry served an average of 31.2 million customers in 1958, higher than the 1957 average of 30.5 million.

While the Federal Reserve Board's index of industrial production recorded a 6.3 per cent annual decline during 1958, sales of gas to industrial consumers increased 0.7 per cent and amounted to nearly 41 billion therms, another record high. Industrial sales represented 50.8 per cent of the industry's total sales of 80.3 billion therms.

Gas industry employment rose 1.8 per cent to 206,200 during 1958, while the annual payroll advanced 6.9 per cent to a new high of $1,113 million. The average pay per employee in 1958 was $5,400, up 5.1 per cent over 1957.

The tabulations used in A. G. A.'s analysis of 1958 gas industry operations are based on statistics published in the 1959 edition of *Gas Facts*, copies of which are available at $3 each from Order Department, A. G. A., 420 Lexington Avenue, New York 17, N. Y.

Sturkey predicts bright future for gas in Pacific Northwest

A BRIGHT FUTURE of growth for the gas industry in the Pacific Northwest was predicted recently by Charles M. Sturkey, president of Washington Natural Gas Co.

In a talk before the New York Society of Security Analysts, Mr. Sturkey told of a gain in space heating customers from 8,800 in 1952 to 30,100 at the end of this past June.

"In commercial business we are picking up just about all of the heating business available and we also find that gas for commercial water heating is the most desirable service that the customer can obtain," he said. "This has shown remarkable progress in the last two years and promises to continue."

When natural gas came into the area of low electric rates in 1956, Mr. Sturkey said, the company launched a program to build the load of heating. This program has proved successful, he noted.

Mr. Sturkey, who pointed out that the company has 2,050 miles of distribution lines to serve 64,000 customers, said that the analysts "may wonder how we are doing so well. The key to the sales," he explained, "is in the large annual use per customer. While the national average is 2,461 therms a year, the company's average is 3,921 per customer."

Mr. Sturkey also said that industry, too, is turning to gas for firm requirements.

"We have recently reduced the last step of our large-volume firm industrial rate schedule and this has made gas much more attractive to industry," he stated. "We were able to make this reduction without any adverse effect on company revenues because one large customer provided sufficient additional net profit to offset the loss on other existing customers.

"Washington State is well blessed with an adequate supply of fresh water for industry and excellent water transportation facilities," he added.

"Our service area, which is often referred to as the 'Heart of Washington,' is the natural terminus of the Alaska and Orient trade. We are now in the process of building some major freeways, and freeways have many times developed light industry-type parks where new industries have gladly settled because of the ease of commuting for workers. All these facilities, along with the added attraction of natural gas, point to a prosperous future," he concluded.

UGI acquires A. C. Horner

THE UNITED GAS IMPROVEMENT CO. has entered into an agreement to purchase the assets of A. C. Horner, Inc., Harrisburg, Pa. The agreement was made through United Gas Improvement's subsidiary, Ugite Gas, Inc. A. C. Horner serves LP-Gas to the eastern and central regions of Pennsylvania from plants in Harrisburg and York. It is the third LP-Gas company in that region to be purchased recently by United Gas Improvement. William E. Horner, president of A. C. Horner, will continue to manage that firm

Central Hudson Gas and Electric promotes Dickson, Corby, Erickson, Megargee

CENTRAL HUDSON GAS AND ELECTRIC CORP. has announced four personnel changes. They are the appointment of Ronald A. Dickson as general cashier, Bruce S. Corby as purchasing agent, Raymond G. Erickson as manager of the newly created public relations and information division, and Anthony S. Megargee as advertising director.

In a related development, the purchasing department, which is headed by Mr. Corby, was consolidated with the operating department under the general direction of Ernest E. Althouse, vice-president—operations.

Mr. Dickson has been with the firm about 30 years. He was named coordinator of methods and practices in 1951, cost and rate division commercial engineer in 1956, and assistant cashier last June.

Mr. Corby joined Central Hudson Gas and Electric in 1952 as assistant to the purchasing agent. He became assistant purchasing agent in 1958. He is a member of the Edison Electric Institute's purchasing and stores committee and the New York Chapter of the National Association of Purchasing Agents.

Mr. Erickson started with the company in 1951 as associate editor of the employee newspaper. He was named editor later that year and assistant secretary in 1956. He is chairman of the state legislative committee of the Poughkeepsie Chamber of Commerce.

Mr. Megargee joined Central Hudson Gas and Electric in 1952 as advertising assistant. He became advertising specialist in 1956. He is a member of EEI's advertising committee.

Personal and otherwise

Morgan succeeds Brinker as A. O. Smith vice-president

MILTON E. MORGAN has been named vice-president of A. O. Smith Corp.'s Permaglas division.

He succeeds John H. Brinker, who resigned recently to become executive vice-president and a director of J. I. Case Co., a manufacturer of farm and construction machinery.

Mr. Morgan, who became a vice-president in 1957, served as corporate purchasing director from 1956-57. Before that, he was assistant general sales manager for automotive products. He joined the company in 1935.

At A. O. Smith, Mr. Brinker rose from southwestern sales manager to corporate director of marketing in five years. He subsequently became general manager of both the sales and manufacturing operations of the Permaglas division.

As executive vice-president of J. I. Case, Mr. Brinker will head the staff of key executives in the company's operating management group.

Public Service Electric and Gas promotes Roemmele, 7 others in distribution section

HOWARD C. ROEMMELE has been promoted to transmission and distribution engineer of the gas distribution department of Public Service Electric and Gas Co.

Mr. Roemmele, who was assistant to the general superintendent of gas distribution, succeeds Martin J. White, who retired.

Other promotions in the gas distribution department were these:

Frederic C. Scofield—from superintendent, Jersey City district, to design engineer, Hudson division.

Mark G. Hoepfner—from superintendent, Paterson district, to superintendent, Jersey City district.

Walter W. Werder—from superintendent, North Hudson district, to engineer, Hudson division.

John E. Lacey—from design engineer, Hudson division, to superintendent, North Hudson district.

James R. Cochran—from superintendent, Ridgewood district, to superintendent, Paterson district.

Arthur Barrowclough—from superintendent, Pompton district, to superintendent, Ridgewood district.

Wilbur Ackerman—from assistant to the superintendent of distribution, Ridgewood district, to superintendent, Pompton district.

Mr. Roemmele joined the company in 1923. He became assistant to the engineer in the Southern division gas distribution department in 1926, superintendent of distribution in the Camden district in 1928, staff engineer in the Southern division of the gas distribution department in 1956, and superintendent of the Central division later in 1956.

Mr. Scofield started with Public Service in 1934. He was named superintendent of the Jersey City district in 1952.

Mr. Hoepfner became associated with the company in 1950 and was appointed superintendent of the Paterson district in 1956.

Mr. Werder joined the firm in 1947 and was named superintendent of the North Hudson gas distribution district in 1956.

Mr. Lacey started with Public Service in 1949 and was promoted to design engineer in the Hudson division in 1956.

Mr. Cochran joined the company in 1948 and was named superintendent of distribution in the Ridgewood district in 1953.

Mr. Barrowclough started with the firm in 1928 and was promoted to superintendent of the Pompton district in 1956.

Mr. Ackerman joined Public Service in 1931 and was appointed assistant to the superintendent of distribution in the Ridgewood district in 1955.

H. R. Maxon earns GAMA's distinguished service award for contributions to industry

HARRY R. MAXON, retired chairman and founder of Maxon Premix Burner Co. and a pioneer in bringing natural gas to industrial markets, was honored recently "for 43 years of leadership in the gas industry" with the distinguished service award of the industrial gas equipment division of the Gas Appliance Manufacturers Association.

Mr. Maxon was cited for bringing into being numerous major improvements in industrial gas use.

From 1910 until his retirement in 1954, the citation stated, Mr. Maxon "was responsible for many new methods of firing gas industrial furnaces and large boilers, as well as the development of high-temperature gas applications that made possible more efficient forge furnaces, refractory kilns, malleable iron furnaces, and other industrial processing equipment."

Mr. Maxon took his first job in the gas industry in 1910 in Chicago. After two years there as a trouble shooter for the Charles G. Dawes interests, he went to Muncie on behalf of Central Indiana Gas Co. to help utilize the natural gas being made available by the Ohio pipeline systems from West Virginia.

By 1916, Mr. Maxon had developed a variety of gas-burning systems that would mix natural gas with air and would permit the firing of high-temperature equipment and the improvement of the stability of ignition systems. He obtained basic patents on those designs and formed Maxon Premix Burner in 1916.

During World War I, Mr. Maxon served as a consultant to the United States government and private industry in the task of improving gas heat applications for a large variety of production line tasks serving the war effort. His basic contributions to combustion technology during that period won for him the Franklin Institute Award.

In the years immediately after the war, Mr. Maxon developed his company into a national organization. He was later active in the exploration for, and production of, natural gas. He was also influential in the creation of a number of interstate pipeline distribution systems.

McDowell to succeed Hedrick as president of Peoples Gas Light and Coke

JOSEPH J. HEDRICK will retire as president of The Peoples Gas Light and Coke Co. on Jan. 1. He will be succeeded by Remick McDowell, executive vice-president. The position of executive vice-president will not be filled.

J. J. Hedrick

Remick McDowell

R. M. Drevs

In another development Robert M. Drevs, secretary, was elected a vice-president.

Mr. Hedrick will also retire as vice-chairman of the boards of directors of Natural Gas Pipeline Co. of America and other companies in the Peoples Gas system. He will continue to serve the companies in the system in a consulting capacity and as a director of the production, pipeline, and storage subsidiaries.

Mr. Hedrick joined Natural Gas Pipeline of America in 1930 and became president in 1949. He was elected president of Peoples Gas in 1957.

He is a past president of the Independent Natural Gas Association and a former member of the board of directors of A. G. A.

Mr. McDowell, who has been executive vice-president since 1957, joined the firm in 1940 and was elected assistant secretary in 1942. He became secretary of Peoples Gas in 1945, assistant to the chairman in 1949, and vice-president in 1951. He is a past chairman of A. G. A.'s General Public Information Planning Committee.

Mr. Drevs, who started with the company in 1933, was elected assistant secretary and assistant treasurer in 1949, secretary in 1954, and assistant vice-president in 1957. He is a member of A. G. A.'s General Public Information Planning Committee.

Names in the news—a roundup of promotions and appointments

UTILITY

Maurice N. Day has been appointed assistant chief engineer of Michigan Wisconsin Pipe Line Co. and American Louisiana Pipe Line Co. He joined Michigan Consolidated Gas in 1949 as a junior engineer in the service shop department and became assistant to the engineer in charge of planning company expansion in 1951.

Jerry D. Wheat has been named administrative assistant in the president's office at Lone Star Gas Co. and Lone Star Producing Co. He joined Lone Star Gas in 1952 and became supervisor of employment in the Dallas personnel office in 1958.

Gilbert R. Miller, purchasing agent for The Ohio Fuel Gas Co., retired on Nov. 1 after 47 years. The holder of one of the firm's longest service records, he joined Ohio Fuel in 1912.

John G. (Jack) Smith, East Bay division gas engineer for Pacific Gas and Electric Co., has been transferred to Calgary, Alberta, to assist in preparations for the Alberta-California natural gas pipeline project. He will serve in Calgary as executive assistant to the vice-president and manager of Alberta and Southern Gas Co., Ltd., Pacific Gas and Electric's gas-purchasing subsidiary.

Lurting K. Beatty has been named air conditioning sales manager for The Peoples Natural Gas Co. He joined the firm six years ago. In another development, **Theodore W. Laub** was promoted to administrative assistant to the general superintendent. He joined the company in 1946 and was previously budget manager.

MANUFACTURER

Earl L. Bedard has joined the engineering staff of the heating equipment division of Iron Fireman Manufacturing Co.

F. R. Amthor has been named engineering vice-president of Hamilton Manufacturing Co. He was previously engineering vice-president of Portable Electric Tools, Chicago.

Robert K. Miller, president of Holly-General Division of The Siegler Corp., has been elected a vice-president of Siegler. Mr. Miller, who has been president of Holly-General since 1958, will continue in that post. He was previously associated with General Electric Co.

The Cleveland Heater Co. has appointed **George L. Tillinghast, Jr.,** a manufacturers representative. He will handle the Rex line of domestic and commercial gas and electric automatic water heaters in eastern New England. Mr. Tillinghast is a past director of the Plumbing and Heating Wholesalers of New England and the former president of the L. H. Tillinghast Supply Co., a plumbing firm.

Emil Blaha has been elected vice-president-ceramic division of Selas Corp. of America. He joined Selas in 1937 as a ceramist and served most recently as manager-ceramic division. During his years with Selas, he has developed numerous ceramic processes, designed many burners and kilns, and been awarded 16 patents.

Mark Beahm, Jr., has joined Pennsylvania Range Boiler Co., Inc., as a factory representative.

M. C. Molgaard, regional manager of a 14-county area in Wisconsin, Iowa, and Minnesota for The Maytag Co., retired on Nov. 1. He joined the company in 1930. Mr. Molgaard has been succeeded by **Guyles M. Sass,** who started with the firm in 1953 and has been serving as a sales and service representative in South Dakota. In another development, **Donald L. Brayton, Fred Frazier,** and **Duane H. Lammert** were promoted to field service assistants. Mr. Brayton, who joined the firm in 1951, has been assigned to Maytag's Richmond branch. Mr. Frazier, who started with the company in 1956, has been sent to the New Orleans branch. Mr. Lammert, who joined Maytag in 1958, has been assigned to the Chicago branch.

Robert Lawrence has joined Caloric Appliance Corp. as marketing manager. He was formerly manager of the appliance bureau of Lever Brothers and western regional sales manager for Monsanto Chemical Co. In another development, **Allen M. Worob** was named as assistant division manager in the New York metropolitan area. He joined Caloric in 1957.

OTHER

Col. Willard F. Rockwell, chairman of the board of Rockwell Manufacturing Co., has been re-elected a member of the National Industrial Conference Board for a one-year term. Col. Rockwell is also a trustee of the conference board.

John R. Spencer has been promoted to director of natural gas activities for Continental Oil Co.'s production department. He succeeds **J. W. Ferguson,** who was promoted recently to general manager of the firm's newly established intrastate gas and gas products department. Mr. Spencer, who joined the company in 1951, was previously engineering section chief in the production department. He has been succeeded by **B. L. Waggoner,** who started with the firm in 1952 and became division engineer at Oklahoma City in 1958. In another development, **F. B. Wilson** was promoted to assistant director of natural gas activities. He joined Continental Oil in 1936 and became coordinator of natural gas sales in 1956.

Ebasco Services, Inc., has added four men to its management consulting staff. They are **Carl E. Anderson,** who will be a general consultant in the manufacturing and industrial field; **Paul L. Gill,** who will be director of industrial planning; **Clinton J. Sammond,** who will be a consultant in the Dallas office; and **Raymond M. Holmes,** who will supervise management consulting activities in the Washington, D. C., office. Mr. Anderson was formerly a vice-president of E. R. Squibb and Sons and Revlon, Inc. Mr. Gill was previously with General Aniline and Film Corp., General Motors Corp., and Owens-Illinois Glass Co. Mr. Sammond was formerly manager of industrial relations for Ebasco International Corp. Mr. Holmes spent more than 20 years as a management consultant and industrial engineer.

Southwest Research Institute promotes Vagtborg, Goland, Reichelderfer, Sharp, Korp

SOUTHWEST RESEARCH INSTITUTE has announced five major personnel changes.

Dr. Harold Vagtborg has been elected executive chairman of the development council and Martin Goland has been elected president of the institute.

In addition, Maj. Gen. Harry Reichelderfer, United States Army (Ret.), was named administrative vice-president and Dr. James Sharp and Henry Korp were appointed technical vice-presidents.

Dr. Vagtborg was previously president of the institute, the post he assumed in 1947 when the institute was founded. He was also formerly president of the Midwest Research Institute and director of Armour Foundation.

He is currently chairman of the board of Southwest Research Center, which includes Southwest Research Institute, Southwest Foundation for Research and Education, and Southwest Agricultural Institute.

Mr. Goland joined Southwest Research Institute in 1955 and was elected director in 1957.

He is chairman of the committee on structural dynamics of the National Aeronautics and Space Administration and editor of *Applied Mechanics Reviews*.

Gen. Reichelderfer joined the institute in 1956 after a long Army career. Some of his military posts were commanding general of the Signal Corps Center at Ft. Monmouth; commanding general of the Southwest Signal Corps Training Center at Camp St. Luis Abispo, Calif.; and chief of the Army Security Agency in Washington, D. C.

Dr. Sharp started with the institute in 1954 and served previously as chairman of the department of physics.

Mr. Korp joined the institute in 1953 and previously headed its department of engines, fuels, and lubricants research.

Stout succeeds Roth as vice-president, chief geologist of Columbia's service corporation

ERNEST E. ROTH retired as vice-president and chief geologist of Columbia Gas System Service Corp. on Nov. 1 after 32 years.

Mr. Roth was also a director of the service corporation and a member of the board of these Columbia subsidiaries: United Fuel Gas Co., The Manufacturers Light and Heat Co., and Preston Oil Co.

Mr. Roth has been succeeded as vice-president and chief geologist by Charles E. Stout, who was previously assistant chief of geology.

Mr. Stout joined Columbia in 1930 as a petroleum engineer. He left the company in 1945 to join the Pennsylvania Grade Crude Oil Association.

He subsequently maintained a private practice and worked for National Gas and Oil Corp. of Newark, Ohio. In 1949, he returned to Columbia as manager of the geology and gas depletion departments of United Fuel. In 1951, he became assistant to Mr. Roth.

Before he joined Columbia in 1927, Mr. Roth was associated with Ralph E. Davis, a consulting engineer and geologist.

Chandler to succeed Love at Pacific Gas and Electric

JOSEPH A. LOVE will retire as manager of the gas construction department of Pacific Gas and Electric Co. on Dec. 31. He will be succeeded by M. H. (Hap) Chandler.

During his career, Mr. Love was associated with the construction of virtually all of the 4,000 miles of major transmission lines in the company's gas system. He also oversaw much of the building of the compressor stations and other important parts of the utility's integrated network, which includes more than 18,000 miles of local distribution lines.

Mr. Love first joined the firm in 1912.

Mr. Chandler started with Pacific Gas and Electric in 1940. He is presently senior gas construction engineer.

Siegler promotes Casey

A HENRY CASEY has been appointed director of corporate public relations and advertising for The Siegler Corp.

Mr. Casey, who joined the firm four years ago, will administer a program designed to acquaint the general public with Siegler.

Prior to joining Siegler, Mr. Casey was associated with Ekco Products Co., Chicago.

OBITUARY

John H. Hillman, Jr.

chairman of the board of directors, Texas Gas Transmission Corp., died recently at the age of 79.

In 1913, he incorporated J. H. Hillman and Sons Co., initially a coal and coke brokerage business. The firm later owned and operated a group of coal mines and coke plants.

In 1917, Mr. Hillman formed Hillman Transportation Co., which operates towboats and barges on the three Pittsburgh rivers. Some years later, Hillman Barge and Construction Co. was organized to design and fabricate diesel towboats and steel barges.

After expanding his corporate interests into the steel, chemical manufacturing, oil, and gas industries, and into business, real estate, and banking, Mr. Hillman was active in the reorganization of Davison Coke and Iron Co., which is now Pittsburgh Coke and Chemical Co. He subsequently bought a substantial interest in Pittsburgh Steel Co.

In 1948, he was instrumental in the merger of Memphis Natural Gas Co. and Kentucky Natural Gas Corp. into Texas Gas Transmission. He became chairman of the board that year and held the position until his death.

Mr. Hillman was a director of a number of the predecessor banks of Pittsburgh National Bank, which he helped to organize. He was also a director of the Chemical Bank of New York City.

He was active in Pittsburgh's Morewood-Shadyside Civic Association and he established Hillman Foundation, Inc., which contributed to numerous Pittsburgh charities, hospitals, and schools, and to the Boy Scouts of America.

Mr. Hillman's first wife, Juliet, died in 1940. He was remarried in 1948 to Dora Keen Butcher, who survives him. Other survivors are four sons, three daughters, two brothers, and 13 grandchildren.

Thomas N. McCarter

retired executive vice-president and director of Public Service Corp. of New Jersey, died on Nov. 3. He was 59.

Mr. McCarter was formerly a member of the executive committee of Public Service. His father, who was also named Thomas N. McCarter, founded the corporation in 1903. In addition, he founded A. G. A.'s McCarter Medal, Certificate of Assistance, and Certificate of Recognition, safety awards presented by the Association's Accident Prevention Committee.

The McCarter Medal is given "after a case of successful resuscitation from asphyxiation by natural or manufactured gas supplied by a utility by an employee of any member company of A. G. A."

Mr. McCarter was a member of the New York Stock Exchange from 1929-32.

From 1936-37, he was president of Antwerp (N. Y.) Light and Power Co. He was also vice-president and director of Northern New York Utilities in Watertown and Central New York Power Corp. in Syracuse.

He became assistant vice-president of Public Service and its subsidiaries in 1937, vice-president in 1939, and executive vice-president in 1945.

Mr. McCarter was also executive vice-president of Public Service Electric and Gas Co. of New Jersey, Public Service Coordinated Transport, and Public Service Interstate Transportation Co. In addition, he was a director of the Raritan River Railroad and a former member of the New Jersey State Prison Board of Managers and the New Jersey State Parole Board.

He was a member of both A. G. A. and the Edison Electric Institute.

Mr. McCarter is survived by his widow, Suzanne, two sons, a daughter, two sisters, and three grandchildren.

Nathan Henry Gellert

retired president of Seattle Gas Co., died on Nov. 14. He was 70.

A leading advocate of low-cost natural gas, Mr. Gellert put Seattle Gas back on its feet after it had suffered a period of decline

in the face of strong competition from public power. The company's net income increased 264 per cent between 1940, the year before Mr. Gellert became president, and 1952.

Mr. Gellert retired from Seattle Gas in 1955 to become executive partner in the firm of Gellert, Griffin, Harrigan, and Associates, Seattle consulting engineers.

Later in 1955, Seattle Gas merged with Washington Gas and Electric Co. to become Washington Natural Gas Co.

From 1942-47, Mr. Gellert was president and board chairman of American States Utilities Corp. in Philadelphia, president of Southern California Water Co. in Los Angeles, and board chairman of Edison Sault Electric Co. in Sault Ste. Marie, Mich.

Mr. Gellert was president of Great Lakes Utilities Co. and Atlantic Gas Co. from 1937-43. From 1930-35, he was associated with National Public Utilities Corp., which later became Atlantic Gas. He was president of all National Public Utilities and Atlantic Gas subsidiaries from 1927-43.

Mr. Gellert was the designer and builder of the first successful electrostatic gas cleaner for blast furnaces in the United States.

He was a past president of the Pacific Coast Gas Association and a member of A. G. A.

Survivors include his widow, Georgia, two daughters, two sons, three brothers, two sisters, and nine grandchildren.

Philip E. Beckman

vice-president in charge of gas operations, Pacific Gas and Electric Co., and a former director of A. G. A., died on Nov. 21 of a cerebral hemorrhage. He was 60.

Mr. Beckman joined Pacific Gas and Electric in 1921. From 1922-29, he designed gas generating equipment for the company's gas manufacturing plants. From 1930-35, he worked on Boyles law, gas odorization, pipeline flow, gas utilitization, and calorimetry.

He was a member of the California Natural Gas Association committee that published the first Standards Bulletin, TS-3-53, on gas measurement.

From 1936-45, Mr. Beckman was engaged in the design of the company's distribution and transmission facilities. From 1946-49, he worked on the drafting of natural gas purchase contracts and supply and demand studies.

Mr. Beckman was named general superintendent of the department of technical services in 1950 and vice-president in charge of gas operations in 1954.

He was also vice-president and director of Natural Gas Corp., vice-president and director of Gas Lines, Inc., a director of Standard Pacific Gas Line, Inc., and a director of the Pacific Coast Gas Association. He was elected a director of A. G. A. in 1955.

He is survived by his widow, Loretta.

F. Tom Parks

former vice-president and member of the board of directors of Public Service Co. of Colorado, died on Oct. 22 after a brief illness. He was 69.

Mr. Parks spent 42 years in various phases of the utility business, including refineries, oil and gas production, gas transmission, and gas distribution.

He served with the Cities Service organization until 1928, when he joined Public Service.

Under his direction, natural gas was introduced into such cities as Denver and Pueblo, Colo., and Cheyenne, Wyo.

He became a director of Public Service in 1939 and vice-president in 1943. He was also a director of Colorado-Interstate Gas Co., Colorado Oil and Gas Corp., and Natural Gas Producers, Inc.

Mr. Parks retired from Public Service on June 1, 1958. He served as a gas industry consultant from that date until his death.

He is survived by his widow, Minnie, a son, and a daughter.

Statement Required by the Act of August 24, 1912, as Amended by the Acts of March 3, 1933, and July 2, 1946 (Title 39, United States Code, Section 233) Showing the Ownership, Management and Circulation of

The American Gas Association Monthly published monthly, except July and August, bi-monthly then; at Brattleboro, Vermont for October 1, 1959.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, American Gas Association, Inc., 420 Lexington Ave., New York 17, N. Y.; Editor, Walter H. Dyer, 420 Lexington Ave., New York 17, N. Y.; Managing editor, None; Business manager, None.

2. The owner is: American Gas Association, 420 Lexington Ave., New York 17, N. Y.; President, J. Theodore Wolfe; 1st Vice President, W. H. Ligon; 2nd Vice President, L. T. Potter; Treasurer, Vincent T. Miles; Assistant Treasurer, James F. Daly; Managing Director, Chester S. Stackpole; Secretary, Jac A. Cushman (all of 420 Lexington Ave., New York 17, N. Y.)

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

WALTER H. DYER, Editor.

Sworn to and subscribed before me this 22nd day of September, 1959.

ROBERT J. CUTTING
NOTARY PUBLIC, STATE OF NEW YORK
No. 30-5895810
Qualified in Nassau County
Term Expires March 30, 1960

CONVENTION CALENDAR

1960

FEBRUARY

1-4 •American Society of Heating, Refrigerating and Air Conditioning Engineers, Semiannual Meeting, Memorial Auditorium, Dallas, Texas.

4-6 •A.G.A. Home Service Workshop, Drake Hotel, Chicago, Ill.

15-16 •A. G. A.-EEI Final Conference Planning Meeting, Sheraton-Cadillac Hotel, Detroit, Mich.

24-28 •American Institute of Laundering, Annual Meeting, Chicago, Ill.

29-March 2 •General Management Section Conference, Pittsburgh-Hilton Hotel, Pittsburgh, Pa.

MARCH

7-10 •American Society of Bakery Engineers, Annual Meeting, Chicago, Ill.

14-18 •National Association of Corrosion Engineers, Annual Convention, Dallas, Texas.

21-23 •Mid-West Gas Association, Annual Meeting and Convention, Hotel St. Paul, St. Paul, Minn.

24-25 •New England Gas Association, Annual Meeting, Hotel Statler, Boston, Mass.

24-25 •Oklahoma Utilities Association, Annual Convention, Biltmore Hotel, Oklahoma City, Okla.

30-April 1 •Gas Appliance Manufacturers Association, Annual Meeting, The Greenbrier, White Sulphur Springs, W. Va.

APRIL

5-7 •A. G. A. Sales Conference on Industrial and Commercial Gas, The Shamrock-Hilton Hotel, Houston, Texas.

8-9 •Florida-Georgia Gas Association Convention, Biltmore Hotel, Palm Beach, Fla.

18-23 •American Institute of Architects, Annual Meeting, San Francisco, Calif.

19-21 •Research and Utilization Conference, Hotel Carter, Cleveland, Ohio.

21-22 •Indiana Gas Association, French Lick-Sheraton Hotel, French Lick, Ind.

24-26 •Independent Petroleum Association of America, Mid-year Meeting, Denver Hilton Hotel, Denver, Colo.

25-27 •A. G. A.-Edison Electric Institute National Conference of Electric and Gas Utility Accountants, Roosevelt and Commodore Hotels, New York City.

25-27 •Southern Gas Association, Annual Convention, Galveston, Texas.

Personnel service

SERVICES OFFERED

Field and/or Sales Engineer—22 years experience with all types and phases of gas heating and air conditioning equipment. Directly responsible for 24,000 central gas heating plants and air conditioning units. This consisted of heat loss and heat gain calculations from blue prints for sizing equipment and estimating operational costs. Field checking and adjusting new installations. Registered in Ohio and New York states as professional engineer. Married, have three children, will relocate, age 40. **1966.**

December Graduate—gas fuel department, Southern Technical Institute, unit of Georgia Tech., desires position in gas industry or related field. Good technical and liberal arts background. Also trained in petroleum sales but limited in experience. Married. Prefer Midwest. **1967.**

March Graduate—gas fuel department, Southern Technical Institute, unit of Georgia Tech. Five years previous experience, desires position in technical sales work. Draft exempt. Married. Prefer Western location. **1968.**

Administrative Engineer—young military academy graduate with eight years high level planning coordination and project management in general purchasing, electronic and missile fields with U.S. Air Force, desires challenging assignment in gas industry. Holds B.S. degree in Engineering (West Point) and MBA (Air Force Institute of Technology). Available March 1, 1960. **1969.**

Plant, Distribution and Utilization Experience—manufactured, natural and LP-Gas. Free to travel. Supervision and/or sales desired. **1790.**

Engineer—experienced in gas distribution and in gas and electric property accounting. Desires administrative, managerial, or supervisory position. Age 39. **1971.**

Engineering Administrator—graduate mechanical engineer with 25 years of experience in heating, air conditioning, and water heating fields. Member of numerous general industry committees. Background includes sales, research, and general management responsibilities. Executive management training course. Detailed resume and references on request. Married. Will relocate. **1972.**

POSITIONS OPEN

Gas or Chemical Engineers—recognized leader in industrial instrumentation industry, located in New England, has openings in its gas industries division, home office, for salesminded engineers. Must be graduate engineers with several years of instrumentation or process control experience in the gas, petroleum or chemical industries. Duties involve application engineering, assisting in design and development of instruments and systems, and customer contact, involving some travel. The ability to work with our customers, sales personnel and home office engineering departments is important. Send complete resume. **0915.**

Comptroller and Assistant Treasurer—accountant to take complete charge of Accounting Department of public utility operating in New York State communities, with non-utility subsidiaries. Supervise 15 accounting personnel in central and six branch offices; must be familiar with preparation of corporate and consolidated financial statements, operating and cash budget forecasts, and accounting exhibits in rate proceedings. Financial background, including taxes, should contribute toward company program for fund utilization. Opportunity for advancement to Treasurer. Send detailed resume including photograph. Starting range—$12,000. **0916.**

Distribution Superintendent—a small fast-growing independent natural gas utility located in Midwest has opening for distribution superintendent. Excellent opportunity for advancement. Send full resume of experience and background, also salary requirement. **0917.**

Industrial and Commercial Sales Engineer—Southeast Wyoming utility has opening for sales engineer. E.E. or M.E. degree preferred or experience equivalent. Excellent working conditions and fringe benefits. Salary plus commission commensurate with ability and experience. An excellent opportunity in a rapidly expanding growth area. Send complete resume. Replies held in confidence. **0919.**

Industrial Gas Salesman—aggressive natural gas utility (Eastern Pennsylvania) requires services of man with experience to call on customers to promote gas sales for industrial and commercial applications. Fringe benefits available. Salary open. **0920.**

Development Engineer—manufacturer of gas, oil and electric space heating equipment needs man to assist development and laboratory work to consist of design, testing, model building, etc. Mechanical engineering background preferred. A. G. A. Laboratories training helpful. Send resume or call Personnel Manager, Coolerator Division, McGraw-Edison Co., 704 N. Clark St., Albion, Mich. **0921.**

Norge markets new gas combination washer and dryer

A GAS COMBINATION washer and dryer has been added to the major gas appliance line marketed nationally by Norge Division of Borg-Warner Corp.

Production and shipment of the new unit, which will be sold through utilities, distributors, and dealers, has been started in the Norge plant in Effingham, Ill.

Judson S. Sayre, president of Norge, described the new appliance as "opening an important new potential market for Norge." The company now merchandises gas dryers with matching automatic washers, gas washer-dryer combinations, gas ranges, gas built-ins, and gas water heaters.

The new Norge gas combination incorporates a lint screen that cleans itself; a self-cleaner that cleans the cylinder automatically after each wash; a master washing control that gives a selection of three wash cycles—normal, wash-n-wear, and gentle; a drying control that provides drying times from 10 to 115 minutes on the normal setting; and a drying action that continues for the number of minutes selected to obtain the desired degree of damp-dry or full-dry. A complete wash and dry cycle takes 75 minutes. The new combination's flexibility permits the machine to be set on "wash only"; in such an instance, the drying control need not be activated.

North Carolina Natural praised for 630-mile transmission system

P McDONALD BIDDISON, president of North Carolina Natural Gas Corp., and his company were praised for the successful completion of the state's new 630-mile gas transmission system at a recent "Progress Luncheon" attended by mayors and civic leaders from 22 North Carolina communities.

Mr. Biddison was lauded for his "leadership and determination" in bringing natural gas to hitherto unserved areas "despite what seemed to be insurmountable odds."

The cross-state transmission project, which cost more than $22 million, has resulted in natural gas service for 31 new communities throughout south-central and eastern North Carolina.

North Carolina Natural has installed distribution systems in 22 of these communities. They are Aberdeen, Albemarle, Benson, Clinton, Dunn, Erwin, Farmville, Goldsboro, Hamlet, Laurinburg, Lillington, Lumberton, Norwood, Raeford, Red Springs, Rockingham, Roseboro, Salemburg, Southern Pines, St. Pauls, Tarboro, and Wadesboro.

In addition, the company supplies natural gas to Monroe, Wilson, Rocky Mount, and Greenville. It also has entered into a service agreement with Tidewater Natural Gas Co. to furnish natural gas requirements for that company, which has franchises in Fayetteville, Wilmington, Kinston, New Bern, and Washington.

North Carolina Natural's main artery connects with Transcontinental Gas Pipe Line Corp.'s interstate line at a point near Charlotte.

Copenhagen sends 4 old gas lamps to Dana College in Nebraska

DANA COLLEGE IN BLAIR, NEBR., has received four gas lamps from Copenhagen. The lamps, which were installed in the Danish city in 1857, were a gift to the college on the occasion of its 75th anniversary.

The lamps were originally installed in Copenhagen to replace the old oil lamps that had been in use since 1680. The installation of the gas lights is said to have inspired Hans Christian Andersen to write the fairy tale about "Godfather's Picture Book."

When Dana College learned last spring that Copenhagen planned to replace most of the gas lamps with electric fixtures, it wrote to that city about the possibility of obtaining some of the old lamps.

In reply, Mayor Ingvard Dahl of Copenhagen wrote, "The municipality will be glad to present the college with four of the old lamps and begs you to consider this as a greeting from Copenhagen to Dana College on its 75th anniversary."

At the same time, Denmark decided to preserve some of the old gas lamps in the Christianshavn section of Copenhagen. That section was built during the 17th century reign of Christian IV.

A.G.A. advisory council

E. R. ACKER.....Poughkeepsie, N. Y.
J. B. BALMER.....New York, N. Y.
F. M. BANKS.....Los Angeles, Calif.
L. L. BAXTER.....Fayetteville, Ark.
D. B. W. BROWN.....New York, N. Y.
A. G. BUR.....Green Bay, Wis.
F. D. CAMPBELL.....Cambridge, Mass.
STUART COOPER.....Wilmington, Del.
W. C. DAVIS.....Chicago, Ill.
J. F. DONNELLY, SR.....Milwaukee, Wis.
E. H. EACKER.....Boston, Mass.
W. M. ELMER.....Owensboro, Ky.
ELISHA GRAY II.....St. Joseph, Mich.
L. C. HARVEY.....Syracuse, N. Y.
J. J. HEDRICK.....Chicago, Ill.
J. E. HEYKE.....Brooklyn, N. Y.
O. L. JONES.....Toronto, Ont., Canada
D. E. KARN.....Jackson, Mich.
PAUL KAYSER.....El Paso, Texas
JULIUS KLEIN.....Jenkintown, Pa.
D. C. LUCE.....Newark, N. J.
A. W. LUNDSTRUM.....Columbus, Ohio
W. G. MAGUIRE.....New York, N. Y.
N. H. MALLON.....Dallas, Texas
D. H. MITCHELL.....Hammond, Ind.
W. E. MUELLER...Colorado Springs, Colo.
G. T. MULLIN.....Minneapolis, Minn.
D. W. PETERSON.....Minneapolis, Minn.
C. P. RATHER.....Birmingham, Ala.
L. B. RICHARDS.....Harrisburg, Pa.
W. F. ROCKWELL, JR.....Pittsburgh, Pa.
E. C. SORBY.....Kankakee, Ill.
N. R. SUTHERLAND...San Francisco, Calif.
E. H. TOLLEFSON.....New York, N. Y.
G. E. WHITWELL.....Philadelphia, Pa.
J. H. WIMBERLY.....Houston, Texas
R. E. WRIGHT.....Cambridge, Mass.
C. H. ZACHRY.....Dallas, Texas

PAR COMMITTEE

Chairman—H. A. Eddins, Oklahoma Natural Gas Co., Tulsa, Okla.

General Promotional Planning Committee
Chairman—Frank M. Foster, Southern California Gas Co., Los Angeles, Calif.

General Research Planning Committee
Chairman—Fred W. Batten, Columbia Gas System Service Corp., New York, N. Y.

General Public Information Planning Committee
Chairman—R. J. Rutherford, Worcester Gas Light Co., Worcester, Mass.

FINANCE COMMITTEE

Chairman—E. R. Acker, Central Hudson Gas & Electric Corp., Poughkeepsie, N. Y.

LABORATORIES MANAGING COMMITTEE

Chairman—William J. Harvey, Public Service Electric and Gas Co., Newark, N. J.

APPROVAL REQUIREMENTS COMMITTEE

Chairman—R. I. Snyder, Southern California Gas Co., Los Angeles, Calif.

Associated organizations

GAS APPLIANCE MANUFACTURERS ASSOCIATION
Pres.—Edward A. Norman, Norman Products Co., Columbus, Ohio.
Man. Dir.—Harold Massey, 60 East 42nd St., New York, N. Y.

CANADIAN GAS ASSOCIATION
Pres.—N. E. Tanner, Trans-Canada Pipelines, Ltd., Calgary, Alberta.
Man. Dir.—W. H. Dalton, 2532 Yonge St., Toronto, Ontario.

FLORIDA-GEORGIA GAS ASSOCIATION
Chrmn.—Kimbel W. Pofahl, Gainesville Gas Co., Gainesville, Fla.
Sec.-Tr.—J. D. Nelson, director of Clearwater utilities, Clearwater, Fla.

INDIANA GAS ASSOCIATION
Pres.—E. E. Ihlstrom, Richmond Gas Corp., Richmond, Ind.
Sec.-Tr.—R. A. Steele, Citizens Gas & Coke Utility, 2020 N. Meridian St., Indianapolis, Ind.

THE MARYLAND UTILITIES ASSOCIATION
Pres.—Austin E. Penn, Baltimore Gas and Electric Co., Baltimore, Md.
Sec.—Frank J. Little, 230 St. Paul Place, Baltimore, Md.

MICHIGAN GAS ASSOCIATION
Pres.—John B. Simpson, Consumers Power Co., Jackson, Mich.
Sec.-Tr.—M. G. Kendrick, Michigan Consolidated Gas Co., Detroit, Mich.

MID-WEST GAS ASSOCIATION
Pres.—R. S. Stover, R. S. Stover Co., Marshalltown, Iowa.
Sec.-Tr.—Everett E. Baxter, P.O. Box 137, Bronson, Mo.

NATURAL GAS AND PETROLEUM ASSOCIATION OF CANADA
Pres.—J. R. Reeves, Buffalo, N. Y.
Sec. and Asst. Tr.—H. B. Fry, United Gas & Fuel Co. of Hamilton, Hamilton, Ontario.

NEW ENGLAND GAS ASSOCIATION
Pres.—G. R. Copeland, Algonquin Gas Transmission Co., Boston, Mass.
Man. Dir.—Clark Belden, 10 Newbury St., Boston, Mass.

NEW JERSEY GAS ASSOCIATION
Pres.—Frank C. Pesveyc, Public Service Electric & Gas Co., Newark, N. J.
Sec.-Tr.—Ralph E. Martin, New Jersey Natural Gas Co., Asbury Park, N. J.

OKLAHOMA UTILITIES ASSOCIATION
Pres.—Wright Canfield, Public Service Co. of Oklahoma, Tulsa, Okla.
Sec.—Thelma T. Jones, Suite 2415, Oklahoma Biltmore Hotel, Oklahoma City, Okla.

PACIFIC COAST GAS ASSOCIATION
Pres.—Walter T. Lucking, Arizona Public Service Co., Phoenix, Ariz.
Man. Dir.—Robert D. Scott, 870 Market St., San Francisco, Calif.

PENNSYLVANIA GAS ASSOCIATION
Pres.—W. C. Pierson, Philadelphia Electric Co., Philadelphia, Pa.
Sec.-Tr.—James A. Schultz, Reading Gas Division, United Gas Improvement Co., Reading, Pa.

PENNSYLVANIA NATURAL GAS MEN'S ASSOCIATION
Pres.—D. B. Beecher, Equitable Gas Co., Pittsburgh, Pa.
Sec.-Tr.—P. L. Kesel, Carnegie Natural Gas Co., Pittsburgh, Pa.

ROCKY MOUNTAIN GAS ASSOCIATION
Pres.—Glenn Waddell, Independent Gas Service, Inc., Denver, Colo.
Sec.-Tr.—H. P. Risley, Public Service Company of Colorado, Denver, Colo.
Field Sec.—Roy G. Munroe, Rm. 16, 1300 Glenarm St., Denver, Colo.

SOUTHEASTERN GAS ASSOCIATION
Pres.—Clifford B. Ewart, Tidewater Natural Gas Co., Wilmington, N. C.
Sec.-Tr.—Edward W. Ruggles, North Carolina State College, Raleigh, N. C.

SOUTHERN GAS ASSOCIATION
Pres.—O. W. Clark, Southern Natural Gas Co., Birmingham, Ala.
Man. Dir.—Robert R. Suttle, 1524 Life of America Building, Dallas, Texas.

WISCONSIN UTILITIES ASSOCIATION
Pres.—Stuart V. Willson, Northern States Power Co., Eau Claire, Wis.
Man. Dir.—Dale F. Hansman, Empire Building, Suite 522, 710 North Plankinton Ave., Milwaukee, Wis.

American Gas Association

HEADQUARTERS, 420 LEXINGTON AVE., NEW YORK 17, N. Y.

A. G. A. LABORATORIES • 1032 East 62nd Street, Cleveland 3, Ohio • 1425 Grande Vista Avenue, Los Angeles, Calif.

WASHINGTON OFFICE • Room 804, Securities Bldg., 729-15th St., N.W., Washington 5, D. C.

◀ Officers ▶

*President	WISTER H. LIGON	Nashville Gas Co., Nashville, Tenn.
*First Vice-President	LESTER T. POTTS	Lone Star Gas Co., Dallas, Texas
*Second Vice-President	EDWARD H. SMOKER	The United Gas Improvement Co., Philadelphia, Pa.
*Treasurer	VINCENT T. MILES	Long Island Lighting Co., Mineola, N. Y.
Assistant Treasurer	JAMES F. DALY	Long Island Lighting Co., Mineola, N. Y.
Assistant Treasurer	CHARLES J. DUNNE	Long Island Lighting Co., Mineola, N. Y.
*Managing Director	CHESTER S. STACKPOLE	American Gas Association, New York, N. Y.
Secretary	JAC A. CUSHMAN	American Gas Association, New York, N. Y.

◀ Directors ▶

*Immediate Past President	J. THEODORE WOLFE	Baltimore Gas and Electric Co., Baltimore, Md.	
*ESKIL I. BJORK	Chicago, Ill.	*ROBERT A. HORNBY	San Francisco, Calif.
EVERETT J. BOOTHBY	Washington, D. C.	ANDREW W. JOHNSTON	Boston, Mass.
H. DONALD BORGER	Pittsburgh, Pa.	*OAKAH L. JONES	Toronto, Canada
ORVILLE S. CARPENTER	Shreveport, La.	WALTER T. LUCKING	Phoenix, Ariz.
MARVIN CHANDLER	Aurora, Ill.	RALPH T. McELVENNY	Detroit, Mich.
CARL E. CLOUD	Little Rock, Ark.	*E. CLYDE McGRAW	Houston, Texas
WENDELL C. DAVIS	Chicago, Ill.	S. LLOYD NEMEYER	Milwaukee, Wis.
BUELL G. DUNCAN	Charlotte, N. C.	EDWARD A. NORMAN	Columbus, Ohio
*ROBERT E. GINNA	Rochester, N. Y.	*ED PARKES	Shreveport, La.
ELISHA GRAY II	St. Joseph, Mich.	JOHN C. PARROTT	Roanoke, Va.
CHARLES H. GUEFFROY	Portland, Ore.	JOHN W. PARTRIDGE	Charleston, W. Va.
*WILLIAM G. HAMILTON, JR.	Philadelphia, Pa.	N. R. SUTHERLAND	San Francisco, Calif.
WILLIAM J. HARVEY	Newark, N. J.	GUSTAV F. WATTERS	Syracuse, N. Y.
HALL M. HENRY	Cambridge, Mass.	S. D. WHITEMAN	Hastings, Nebr.
JOHN E. HEYER	Brooklyn, N. Y.	*JOHN H. WIMBERLY	Houston, Texas

◀ Section Chairmen ▶

Accounting Section	C. H. MANN, Columbia Gas System Service Corp., New York, N. Y.
General Management Section	OTTO W. MANZ, JR., Consolidated Edison Co. of New York, Inc., New York, N. Y.
Industrial and Commercial Gas Section	FRED A. KAISER, Michigan Consolidated Gas Co., Detroit, Mich.
Operating Section	J. T. INNIS, Northern Natural Gas Co., Omaha, Nebr.
Residential Gas Section	H. WILLIAM DOERING, Springfield Gas Light Co., Springfield, Mass.

◀ Association Staff ▶

Managing Director	CHESTER S. STACKPOLE	Director of PAR Plan	S. F. WIKSTROM
Assistant Managing Director	JOHN W. WEST, JR.	Director, Promotion and Advertising	NORVAL D. JENNINGS
Assistant to the Managing Director	HAROLD S. WALKER, JR.	Advertising Manager	KENNETH F. MULDOON
Director, A. G. A. Laboratories	FRANK E. HODGDON	Promotion Manager	LEONARD M. HAMAN
Manager, Pacific Coast Headquarters	W. H. VOGIAN	Manager, Home Bureau	GERALD P. MULLIN
Secretary and Convention Manager	JAC A. CUSHMAN	Manager, Commercial Promotion	HAYES S. WALKER
Controller	ROBERT J. CUTTING	Director, Research	THOMAS LEE REYNOLDS
Secretary, Accounting Section	THOMAS J. SHANLEY	Research Consultant	DR. N. R. SUTHERLAND
Secretary, General Management Section	VAUGHAN O'BRIEN	Director, Public Information	JAMES M. BEALL
Safety Manager	RAUEL N. PAPICH	Southern Regional Mgr., Dallas, Texas	RAYMOND E. CRAIG
Secretary, Industrial and Commercial Section	RALBERN H. MURRAY	Midwest Regional Mgr., Grosse Pointe, Mich.	PAUL HOSKINS
Secretary, Operating Section	J. STANFORD STOCKELL	Eastern Regional Mgr., Forest Hills, N. Y.	ROBERT H. LOCKE
Home Service Counselor	JESSIE McCLEEN	Mgr., Hollywood Bureau	M. D. PUCHOLOFF
Director, Bureau of Statistics	DANIEL PARSON	Manager, Washington Office	CURTIS HOOD
Director, Utilization Bureau	C. GEORGE SEGELER	Utilization Engineer, Washington	EDWARD KRAUS

* EXECUTIVE COMMITTEE OF THE BOARD OF DIRECTORS.

PRINTED IN U. S. A.